



SHIP-BUILDING AND COMMERCE
IN ANCIENT BENGAL

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Ship-building and Commerce in Ancient Bengal

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From the records, I have come across in course of my researches in the field of old Bengali literature, it shows that ship-building reached a high degree of perfection both in regard to workmanship and efficiency in ancient Bengal when the sea-going ships were actively engaged in promoting the prosperity of the province by conducting commercial intercourse with various countries both within and outside India.

The wood required for the construction of ships were teak, *gāmbhāri*, *tamāl*, *peal*, jackwood, etc. But it seems, the wood of the fabled tree *Manapaban* was, however, best for the purpose. The name itself is poetic, signifying the utmost speed that a vessel would acquire if built with such wood. It was, however, foreign to Bengal and very difficult to be secured as we learn from an elaborate description in Bangsidas (p. 283).

In building a vessel the first work to be done was a ceremony known as 'Dārābindhā' or thrusting of a gold nail (Sonarjal) to the keel (Dārā) with the help of a silver hammer (hātur). It was done by the owner himself. After this ceremony, the actual work of construction was to begin. First a measurement of the vessel was to be taken. Then the keel (Dārā) was to be carefully

constructed with which strong pieces of timber were joined with the help of iron-nails. Next the 'galui' (prow) was to be built. This finished the hold of a vessel. The deck, the *pātātan* (pieces of timber joined to the keel) and the shed were also made. After these, the construction of helm and rudders, and decoration-work made the building of a ship complete. It may be noted that the prow took the appearance of a peacock or a Cuka bird or some other fancy shape specified in the works on art and the ships were accordingly known as "*Maur-pankhi*," "*Cukapankhi*," etc. Mention of seven types of prows representing the shapes of a lion, a buffalo, a serpent, an elephant, a tiger and a bird, is found in old Sanskrit literature, such as *Juktikalpataru*; see also *Viswakosh*, Vol. X, p. 461.

A vivid description of the construction of a vessel is found in *Bangsidas*, p. 286. An idea of this is given below :—

The Lord of Champaka (the merchant Chānd) constructed some vessels for which purpose he himself performed the ceremony of gold nailing (*Sonār-jal* or *jalai*). The length of the vessel was fixed at a thousand yards (more than half a mile, evidently exaggerated). From the keel to the central deck the height was six cubits and a half (thirteen *tāl*) to stabilize the equilibrium of a ship. The bamboo-poles for plying the vessels were also measured with thread. More serious work, however, commenced with the construction of the hold of a ship. The wood ordinarily chosen for the purpose was known as "*Manapaban*," noted for imparting swiftness of the wind to the ship on slightest wish. Very strong pieces of this timber were joined together with the help of iron-nails. Joints were covered by soldering to avoid saline water corroding the iron-nails. In this way the construction of the hold was completed. When it was

finished the metallic sheets (pith-pāt) were fitted and the mat doors (jhāp) fixed up. Then ‘*Māthākāstha*,’ or, ‘*galui*’ (prow) was made, decorated with golden and silver flowers. The principal cabin was built, after the deck composed of wooden planks had been fitted up (*pātātan*). This chief cabin (*Raighar*) was beautifully decorated with rows of artificial flower garlands. On the vessel the mast (*Malum wood*) was duly fitted. The helm (*pā’wāl*) and its auxiliary piece of timber (*jhokābāri*) were also not forgotten. When these had been finished, a nicely ornamented shed was built on the ship. It had rows of ‘*chāmar*’ (chowri) and festoons of various types which made the vessel look pretty. Finally, the eyes of the figure on the prow of the ship were bedecked with jewels resembling the moon. This completed the building of the ship.

A similar description of ships as found in *Kabikankan* is given below (pp. 221-222):—

“Seven ‘*dingās*,’ or, vessels were built by Biswakarmā and his son Dārubrahmā with the assistance of Hanumān. The mighty hero Hanumān began to saw the wood of various denominations such as ‘*Sāl*,’ ‘*tāl*,’ ‘*Kāthāl*,’ ‘*peal*,’ ‘*gāmbhāri*,’ and, ‘*tamāl*.’ The architect Dārubrahmā in the meantime made the iron nails. They made beautiful vessels each of which were hundred yards in length and twenty yards in breadth. The prow of each resembled the head of a *Makara* fish. It was made of ivory and the eye-balls were made of precious gems. First, the ship ‘*Madhukara*’ was constructed. In its central part there was the ‘*raighar*’ containing *rājāsan* or, the principal cabin for the merchant. A nook was reserved for the helmsman and the back part as the strong room for keeping treasures. There was also the mast on the vessel. Of the jack and the teakwoods *danda-kerwal* or the oars were made and a

helm was fitted to the prow of each vessel. The seven vessels were named :—

- (i) Madhukarā (the Bee)—the flagship.
- (ii) Guarekhi (its prow resembled the head of a Lion).
- (iii) Ranajayā (the Victory).
- (iv) Ranavima (the Terrible in war).
- (v) Mahakāya (the Titanic).
- (vi) Sarvadhara (the All-container).
- (vii) Nātsālā (the Amusement-hall).

The following were the principal parts of a vessel :—

- (i) Dārā (helm) or *patiwāl*.¹
- (ii) Mālumkāstha (the mast).
- (iii) Talā (hold).
- (iv) Māthākāstha (prow).
- (v) Chhaighar (shed).
- (vi) Pātātan (deck).
- (vii) Dandakerwāl (Oar).
- (viii) Bangsakerwāl or Dhavaji (bamboo-pole).
- (ix) Fāns (chord).
- (x) Nangar (anchor).
- (xi) Pāl (sail).
- (xii) Dārā (Keel).

The above names are still used to convey the meaning they did in ancient Bengal. It would be interesting for the purpose of comparative study to find out if some of these technical words were analogous to those used in other parts of India in the literature of ship-building.

In the description, given above, we find elaborate details of the different parts of a ship built in those days. Exaggerated descriptions are, however, apparent, in the writings of Bijoy Gupta specially, who flourished

¹ Dara in the present dialect of the countryside means an oar, but in our old books it has oftentimes the meaning given above.

in the fifteenth century, when ship-building as an art was practically abandoned in Bengal. But though there is much of legend in the stories, the old traditions were not altogether lost sight of. Ships of considerable tonnage for commercial purposes were surely still being constructed. See Kabikankan, p. 220. "If hundred carpenters work for a whole year, only one vessel is constructed"; see Bangsidas, p. 285, "sixteen hundred carpenters cut the branches of the '*Manpaban*' tree and piled them up in rows"; see also Bangsidas, p. 282, "By the command of the king, the chief engineer Giribar and the admiral Gopal started with sixteen hundred carpenters." The descriptions of voyages often go to show that ships of titanic dimensions used to be constructed in Bengal even if sufficient allowances are made for poetic exaggerations. In Bijoy Gupta we find the following:—

"First was launched the *Madhukara*. On it the millionaire Chand took his residence. It was followed by the ship called '*Biju-siju*.' This ship was so big that it broke the crooked projections of the banks levelling them on its way owing to its very big dimensions. Then sailed the *Guarekhi*. It was so high that the city of Lanka, situated a long way off, was visible from its deck. After it, sailed, "*Bharar-Patua*." All the Tamil people were on board this ship. It was followed by "*Sankha-chur*" (the Shell-crowned). It was so gigantic a ship that its sides seemed to touch two opposite shores of big rivers and its bottom the ground under water. Next started "*Ajayshelpet*" (the Invincible steel-bottomed). There was arrangement for a big fair on it. Then could be seen the ship '*Udaytara*' (the Morning star); its length was so extraordinary that when half the portion suffered from rain, the other half enjoyed sunshine. Then sailed '*Tiathuti*' (the Parrot-beaked). It was full of merchandise, such as jute

and coarse blankets, etc. Then followed *Dhabal* (the white). It was so big that it moved slowly and often stopped owing to its great bulk when it was to be set in motion again by sacrificing a hundred goats to propitiate the sea-god. Then sailed '*Kedar*' (the great God Siva). Before reaching the shore it had to be worshipped with incense and *Panchapradip* as is done in a temple when performing the evening service. Then came "*Pakshiraj*" (the Prince of birds). Many fruit trees of considerable size were there for use of the people on board the ship. Then was launched the ship "*Bhimaksha*" (the fierce-eyed). Upon it was taken conch shells numbering fourteen lacs. It was followed by the vessel *Sankhatali* (the treasure of shells). Its principal parts were made of sandal wood. Behind it sailed the vessel '*Ajlā-kajlā*.' It used to devour a hundred goats at every turn of the river (meaning that its size was so big that at every turn its motion had to be ensured by a sacrifice of hundred goats). Thus one by one the ships sailed with the merchant for *Gangāsagar*."

The following description taken from Bangsidas (p. 288) may also be noted :—

"The first vessel which Chand launched on water was '*Madhukara*.' Its deck was filled with earth, so that it took the appearance of land upon which a small town with markets were established. The foredeck was reserved for worship. A tank of fresh water was not wanting in it with aquatic plants on its surface to keep it cool and with fishes of various descriptions. A vegetable and a flower garden completed the outfit of this wonderful ship. The merchant Chand ascertained the cost of this ship to be fourteen lacs of rupees as may be gathered from what he said to his treasurer Govinda. He furthermore said that the merchandise on board this vessel was worth the same amount.

See also Bangsidas, p. 319 :—

First started *Sankhachur* followed by “*Chhatighati*” (the ship of wares) which was filled with earthen wares. Then “*Kajal-rekhi*” (Lined with collyrium), “*Durgabar*” (the Boon of Durga), and “*Manikyamerua*” (the Diamond-crowned) sailed one after another. The last was so big that it had to be driven by sixteen hundred oarsmen. Then sailed ‘*Rajballav*’ (the favourite of the king), ‘*Hansakhal*’ (the Royal Duck), and ‘*Sagarfena*’ (the sea-foam) one behind the other. The last one was full of tamil soldiers. Behind these ships came ‘*Udaygiri*’ (the mountain of the rising sun) followed by “*Lakshipashā*” (the abode of the harvest goddess). In the latter ship the priest Subhai took up his residence with all the requisites for worshipping *Hara-Gauri*. The next two vessels were “*Udaytara*” (the Morning Star) and “*Gangaprasad*” (the Favour of the Ganges) respectively. The last one of the fourteen ships was the flagship termed “*Madhukara*” (the Bee) which was the best of the lot. In it the merchant Chand, the lord of the fleet, established his quarters with his five advisers. During the voyage the crew sang *sari* songs (a kind of chorus) all the while.”

Another description is given below from Kabikankan, p. 191 :—

“First was recovered from water the ship “*Madhukara*.” Its drawing-room was made of solid gold. Then came the turn of *Durgābar*. It was full of *Gābar* or sailors. Then came to sight the ship “*Guarekhi*.” Its mast (*Malumwood*) might be seen from a distance of six miles. Another ship which rose up was named *Sankhachur*. It was so big that it had a breadth of eighty yards. Another ship named *Chandrapal* was also recovered from water. Its breadth was so great that when sailing its sides almost touched the banks of the river. The

seventh and the last vessel was named *Chhatimati* which had a cargo of rice."

In spite of the exaggerated descriptions of the poets that we ordinarily come across about big vessels it must not be construed that smaller crafts were lost sight of by them. We find in Bangsidas, p. 320, the following, "The admiral Gopal who sailed first had with him forty-two small boats (*hat nāo*). The construction of the river boats and sea-going ships are now precisely of the same type as we find it in the old literature, and the nomenclature adopted in the past was on the whole the same as we use it now. It seems that the sea-going vessels and the rivercrafts were built on the same principle. Even the other day a coasting vessel named *Aminakhatun* and its sister vessels of considerable tonnage were built by a merchant of Chittagong with the help of local carpenters and mechanics and the method of building they adopted, appears to be the same as it was done in the past. The strong build and the high speed of these sailing ships were perhaps not inferior to those of similar ships used in England in the days of Nelson. The coincidence of keeping a flagship in the mercantile marine as we find to-day in the navy of the civilised nations is curious indeed. The numbers of ships, seven and fourteen, which the merchants of old generally adopted in completing a fleet were perhaps due to the notion that these numbers were auspicious. For a fuller information about the old Bengali vessels reference may be made to the Folk-Literature of Bengal, pp. 65, 75 and 249.

Among the crew the following may be noted:—

- (1) Gābar (sailors) who were of two classes.
 - (a) Mānjhi or Oarsmen. (b) Dāri or Karnadhār (helmsmen).
- (2) Sutradhar (carpenter).

- (3) Karmakār (blacksmith).
- (4) Pāik (foot soldiers).
- (5) Dubāri (Diver).
- (6) Mirbahar (admiral).
- (7) Kārikar (craftsman of various description).
- (8) Kārāri (helmsman and captain).

Gābar.—A sailor. The caste from which boatmen were generally recruited is still known in Bengal as *Gābar*. They were exceptionally sturdy as the term "*Gaithyār-gābar*," applied to them, signifies great physical strength. The sailors used to sing a chorus called *sāri* when plying their oars. See History of Bengali Language and Literature, p. 396. See also *Satyanarayana Punthi* edited by Abdul Karim and *Manasa Mangal* poems for *Gābar*. The sailors were mainly East Bengal people. See Kabikankan, pp. 198 and 207-208. For plying vessels the *Gābars* used 'Danda' (helm), *Danda kerwāls* (oars), *Bangsakerwāls* (bamboo-poles) and *Fāns* (chords). See p. 195, Kabikankan. See also Kabikankan, pp. 227, 228, 207, 229, 234, 236, 194 for *Gabar*, *Kerwals*, etc.

Sutradhar (carpenter).—Carpenters were needed for repairs and joining of parts; they supplied the necessary crew corresponding to an Engineering staff maintained on board a modern ship.

Karmakār (Blacksmith).—Blacksmiths were engaged in building a ship and as their services were considered indispensable, they were taken on board the ships.

Pāik (foot-soldiers).—They were taken on board the vessels engaged in mercantile pursuits due perhaps to the insecurity of the age. They were engaged to protect the valuable merchandise against any possible attack of pirates or hostile foreigners. The soldiers engaged belonged to different countries. See Bangsidas, p. 329. Mention is found of the Telegu soldiers employed by

the Bengalis in the *Manasā-mangal* and the *Dharma-mangal* poems.

Dubāri, or divers.—They accompanied sea-going merchant vessels to ascertain if there was anything wrong in that part of a vessel which remained under the water. See *Bangsidas*, p. 329.

Mirbahar (Admiral).—It is an abbreviation of the Arabic term *Amir-al-Bahar* meaning an admiral of a fleet. The admirals would accompany not only warships but also armed merchantmen as appears from the description of Chand's voyage of trade. In *Bangsidas* we find the admiral Gopal accompanying the expedition of carpenters in quest of *Manapaban* wood perhaps to protect them from any possible aggression. This precaution was necessary to provide against the insecurity of the age.

Merchandise.—As for merchandise on board the Bengali vessels it may be said that our poets described them as mainly intended for export to *Pātan* and *Singhal*. A system of barter was generally resorted to and fraud played by the Bengali merchants on foreigners of questionable civilization was a theme of our poets on which all of them wrote in the same strain. We find occasional mention of merchandise, but the prices are sometimes ludicrously exaggerated, as during the time when these Bengali works were written, sea-voyage was reduced to a vague tradition in which facts and fiction were hopelessly blended together. Still we give below two lists which no doubt contain some elements of truth. According to *Bangsidas* it was the Bengali merchants who introduced cocoanuts and betels in some foreign countries. The stories given seem, however, to be mere legend.

Items of Bengali merchandise.	A.	Articles of foreign countries.
in exchange of		
(1) Betel leaves	...	Ten emeralds for each leaf.
(2) Betel-nut	...	Ten gems.
(3) Lime	...	Quick-silver.
(4) Catechew	...	Gorachana (a bright yellow pigment).
(5) Cardamom	...	Pearl.
(6) Satabari	Kámeswar	
(<i>Asparagus racemosus</i>)		Musk.
(7) Fruits	...	Golden bricks, bells, etc.
(8) Vegetable roots	...	Diamond.
(9) Pulses	...	Corals.
(10) Onions and garlies	...	Maces.
(11) Camphor	...	"Bakhar."
(12) Water weeds	...	Diamond.
(13) <i>Dolichos gladiatus</i>		
(Makhana)	...	Ruby.
(14) Goats and sheep	...	Golden does.
(15) Radish	...	Ivory.
(16) Dry fish	...	Sandal wood.
(17) Sugarcane	...	Royal maces (Nabadanda —sign of royalty).
(18) Jute	...	Chowrie (chāmar).
(19) Wooden utensils	...	Golden and silver utensils.
(20) Wooden furniture	...	Golden furniture.
(21) Earthenwares	...	Bell-metal utensils.
(22) Oil and clarified butter	...	Quick-silver.
(23) Kumkum	...	Jarful of honey.
(24) Puppy	...	String of golden bells.
(25) Mosquito curtains, bed- dings, trousers, etc., all made of gunny cloth		Silken clothes and curtains, etc.

See Bangsidas, p. 344, for the above list.

B.

Items of Bengali merchandise.		Articles of foreign countries.
in exchange of		
(1) Deer	...	Horse.
(2) "Biranga"	...	Clove.
(3) Suntha	...	Tanka (a kind of wood apple, <i>Feronia Elephantum</i>).
(4) Ape	...	Elephant.
(5) Pigeon	...	Suā (A bristly Caterpillar).
(6) Fruits	...	"Jayfal."
(7) Bahara	...	Betel-nut.
(8) Jute	...	White chowrie (chāmar).
(9) Glass	...	Emerald.
(10) Sea salt	...	Rock salt.
(11) Dhuti (cloth)	...	Pots.
(12) Oystershell	...	Pearl.
(13) Harital	...	Diamond.
(14) "Joani."	...	"Jira."
(15) "Chua."	...	Sandal-paste.
(16) Sheep	...	Horse.

See Kabikankan Mukundaram's Chandi Kabya, p. 191—Dhanapati's exchange of merchandise in Ceylon—for the above list. The exchange of commodities here seems to be somewhat more reasonable than that to be found in Bangsidas.

The Bengali merchants carried on trade with Ceylon and Patan in Gujrat and visited the following notable ports :—

1. Puri.
2. Kalinga or Calingapatam.
3. Chilkachuli or Chicacole in Madras Presidency.
4. Banpur.
5. Setubandha Rameswar.

6. City of Lanka (in the site of Lanka Singhal or Ceylon).
7. Nilacca or Laccadives.
8. Patan.

One of the chief places outside India visited by the Bengali merchants was the Laccadives. Mention is made also of *Pralamba*, *Nakut*, *Aheelanka Chandrasalya* island and *Abartana* island which we cannot identify but which undoubtedly lay outside our country. Vivid description of the coasting voyage of the Bengali vessels from *Saptagrām* (an inland port of Bengal) to Patan in Gujrat by doubling the Cape of Comorin, is found in the *Manasāmangal* poem of Bangsidas. In *Chandikāvya* by Kabikankan Mukundaram we find accounts of mercantile adventurers of Bengal related in glowing terms. The lists of ports, both Indian and foreign, and the condition of sea-voyage tally in both these works.

In Bangsidās we meet with the following description of the voyage of Chand, the merchant. In spite of fancy and exaggeration a rough idea of the sea-routes and ports may be gleaned from it.

“The merchant started for So Patan. There were great celebrations and festivities at the city of Champaka. All the ships sailed one after another at the head of the Vanguard was the admiral Gopal with forty-two small vessels. After leaving his own territory Chand passed the following places in succession—*Kāmārhati*, *Madhyānagar*, *Pratupgarh*, *Gopālpur* and *Rāmnagar*. He then reached *Kālidah Sāgar* which he crossed leaving to the right *Gandharvapur* and to the left *Birnagar*. Then the merchant reached the mouths of the Ganges after passing *Kāmeswar*, *Mandarerthana*, *Pichalta* and *Rambishnupuri* one after another. At Gangasagar Chand performed worship and sacrificed goats. After leaving Champaknagar the ships were on the voyage for five months. The

merchant passed through many difficult places after having reached the sea. He passed Utkal and Kalinga on his right. Crabs, lobsters, leeches and crocodiles obstructed his passage through the malice of *Manasā Devi*. At last the merchant reached the golden *Lanka* surrounded by golden walls. Chand here saw the *Rakshasa* king and received his pass-port before proceeding further. Then he left Lanka on his right and passed the Malaya mountain near Cape Comorin. He passed also *Bijohnagar* (Ceylonese?) then ruled by King Ahi. The next important place which the merchant passed was *Parasuramtirtha*. Leaving this place the merchant reached the vast sea known as the "*Nilaccarbunk*" (lit. bend of sea near Nilacca—perhaps Laccadives). Reaching this sea the crew felt giddy at the vast expanse of water and deep sound of the waves, big as mountains. They almost lost their way but through the expert direction of Captain Dulai the vessels were steered rightly. It was by looking to the stars that Dulai could keep the right course. After much trouble the merchant Chand and his companions reached the city of *Pātan* then ruled by King Chandraketu. (See Bangsidas, pp. 318-338.)

On Chand's return from *Pātan* he passed the Laccadives sea, the Vindya ranges, Lanka, Setubandha Rameswar, the gulfs were infested with crocodiles, leeches, etc., and reached Kalidahsagar where he experienced heavy storm. (See Bansidas, pp. 396-399.) "

The above description leads us to think that *Pātan*, once a celebrated city in Gujrat, was much frequented by the Bengali merchants who reached the place by sea crossing the Bay of Bengal, part of Indian ocean and the Arabian Sea. The voyage was probably a coasting one and Ceylon which stood mid-way between Bengal and Gujrat by the sea route, was a favourite place of

commerce for the merchants. Pātan is not an inland city similar to that of Tamralipti or Tamluk which was once one of the greatest seaports of Bengal. *Pātan* though means a city such as *Lalitpātan* yet the frequent mention of this particular Pātan and the way leading to it makes us think that it is no other than the Pātan or Somnāth Pātan of Gujrat and not a fanciful creation of our poets.

As for the foreign countries and ports, it seems our merchants frequented the islands and ports of the Bay of Bengal and the Arabian Sea as have already been seen. We see the following in Bijoy Gupta's *Manasāmangal* :—

“O, merchant, listen. In the north King Mukteswar reigns. It is very difficult to comprehend the ways of his people. They take the seeds of pepper for rice. The king of the east is known as Bidyā-Sanga. The greater the bulk of a person the more respect is shown to him. The people are all degraded and the social customs are in a most pitiable condition. Marriage laws are not at all strict as brothers often exchange their wives. Even a brother marries his sister in that land. The women there enjoy complete freedom and use coloured cloth specially to cover the breast. Caste system is not observed at all. In the west the people are barbarous. They bore their ears, show laxity of caste distinction and use ornaments on the neck. They do not give the girls in marriage unless they are sixteen and even then they put the married girl for some time in priest's house in lieu of his fee. A married girl even keeps the house of her husband's sister's husband. In case of any issue being born it shares the property on both sides.¹

¹ The peculiar customs regarding inheritance such as inheritance of nephews as found in Bangsidas are still current among the Nairs. Preserving dead bodies mentioned in the same work show the knowledge of Buddhistic conditions. See Type set, p. 234.

Now hear the condition of Patan or the South Patan. Its king is *Bikram Keshari*. The people of this land is very rich. They keep jars full of gems. In their land conch shells, pearls, etc., are abundantly found as sea waves fling them frequently on the shore in particular phases of the moon. Even the poor there owned oysters and pearls."

The above lines though full of grotesque fiction seem to contain some grains of truth in them. By the north the poet perhaps indicates the foreign countries to north-east of Bengal. From Chittagong onwards to China the people are fond of taking excessive quantity of pepper with their meal. By the east the poet perhaps means the Buddhist Burma and the adjoining countries where owing to the influence of Buddhism, caste system is ignored and marriage laws are less rigorous. The Burmese women are very fond of coloured garments. Freedom of women is also to be found in Burma. By the western country the poet possibly means Madras Presidency which lies to the south-west of Bengal. As for Pātan, it may be said that, it was a rich city as otherwise Bengali merchant vessels would not be described as visiting that place for nothing.

See also *Kabikankan*, pages 195-196, for voyages of the Bengalees:—

"After the performance of the proper ceremonies before sailing, the merchant Dhanapati passed the following places,—Bhowsingerghat, Matiarisafar, Chandigachha, Bolanpur, Purathan, Nabadwip, Mirzapur, Ambna, Santipur, Guptipara, Ula, Khishma, Mahespur, Fulia and Halisahar—all by the side of the Ganges. Then he reached the very celebrated inland port of Bengal known as *Saptagram* by the side of the Tribeni. Here the poet incidentally praised this port and gave it a superior place among the following ports and places (some

of which are Indian and some foreign) known to the poet. They are the ports of Kalinga, Trailanga, Anga, Banga, Carnut, Mahendra, Magadha, Maharastra, Gujrat, Barendra, Vindhya, Pingal, Utkal, Dravir, Rarh, Bijohnagar, Maitra, Dwaraka, Kasi, Kankhal, Kekaya, Purabak, Anayuk, Godabari, Gaya, Sylhet, Kamrup, Koch, Hangar, Trihatta, Manika, Fatika, *Lanka*, *Pralamba*, *Nakutta*, Bagar, *Malay* (Indian), Kurukshetra, Bateswari, *Ahu Lanka*, Sibatatta, Mahanatta and Hastina, etc. According to the poet, the merchants of the above places visit Saptagram but the merchants of Saptagram do never visit those ports and places. (These prove the exaggerated notion of the poet about Saptagram).

At Saptagram the merchant took on board sufficient drinking water for his voyage; then he passed some other places of note by the river banks such as Nimaitirtha, Betarah, Bagan, Kalighat, Omulinga, Chhatrabhoga, Kalipar, Himai, Hetagarb, Sanketamadhaba, Madanmalla, Birkhana, Kalahati, and Dhuligram. On the way he experienced much storm on the river Magra. It took the merchant twenty days to reach the canal of *Angarpur*. Then his vessels entered the sea adjoining the country of the Dravidas. The first place of note was Puri celebrated for its temple of Jagannath. Then the merchant visited Chilkachuli, or Chicacole. Next ports of note were Balighata and Banpur which were left very soon. Then they reached the land of the Firinghees (Portuguese). They passed this place stealthily at night as they were afraid of these people who were very strong for their fleet of warships which were known as Harmada (Portuguese Armada, the Portuguese being very strong in ships in these parts). Dhanapati then passed some seas infested with crabs, snakes and crocodiles, etc., like Chand. After much difficulty he reached *Lanka*. Before reaching Lanka Dhanapati's vessels touched

Setubandha-Rameswar and crossed *Kalidaha* or Black Sea."

It is peculiar that *Kalidaha* which Bangsidas mentions to be near Bengal, Kabikankan places near Ceylon. It may be that any expanse of blue sea was taken by them to be *Kalidaha*. As for the mention of the Harmadas it may safely be said that they are matters of history. The Portuguese pirate vessels were for some time the curse of the eastern sea.

In the voyage of Srimanta, son of Dhanapati, we come across two islands namely, Chandrasalya and Abar-tana, both lying on the way to Ceylon. We cannot locate these two islands as we cannot locate Banpur "en route" to Chand's voyage for obvious reasons. Though there is evidently much exaggeration about the size of the ships, it is quite probable that the ships of the Bengali merchants were often of enormous size, for enormity of size was the fashion of the time. The Bengali poets had some traditions of the past, to which they added much that they derived from their imaginations.



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Ship-building and Commerce in Ancient Bengal

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From the records, I have come across in course of my researches in the field of old Bengali literature, it shows that ship-building reached a high degree of perfection both in regard to workmanship and efficiency in ancient Bengal when the sea-going ships were actively engaged in promoting the prosperity of the province by conducting commercial intercourse with various countries both within and outside India.

The wood required for the construction of ships were teak, *gāmbhāri*, *tamāl*, *peal*, jackwood, etc. But it seems, the wood of the fabled tree *Manapaban* was, however, best for the purpose. The name itself is poetic, signifying the utmost speed that a vessel would acquire if built with such wood. It was, however, foreign to Bengal and very difficult to be secured as we learn from an elaborate description in Bangsidas (p. 283).

In building a vessel the first work to be done was a ceremony known as 'Dārābindhā' or thrusting of a gold nail (Sonarjal) to the keel (Dārā) with the help of a silver hammer (hātur). It was done by the owner himself. After this ceremony, the actual work of construction was to begin. First a measurement of the vessel was to be taken. Then the keel (Dārā) was to be carefully

constructed with which strong pieces of timber were joined with the help of iron-nails. Next the 'galui' (prow) was to be built. This finished the hold of a vessel. The deck, the *pātātan* (pieces of timber joined to the keel) and the shed were also made. After these, the construction of helm and rudders, and decoration-work made the building of a ship complete. It may be noted that the prow took the appearance of a peacock or a Cuka bird or some other fancy shape specified in the works on art and the ships were accordingly known as "*Maur-pankhi*," "*Cukapankhi*," etc. Mention of seven types of prows representing the shapes of a lion, a buffalo, a serpent, an elephant, a tiger and a bird, is found in old Sanskrit literature, such as *Juktikalpataru*; see also *Viswakosh*, Vol. X, p. 461.

A vivid description of the construction of a vessel is found in *Bangsidas*, p. 286. An idea of this is given below :—

The Lord of Champaka (the merchant Chānd) constructed some vessels for which purpose he himself performed the ceremony of gold nailing (*Sonār-jal* or *jalai*). The length of the vessel was fixed at a thousand yards (more than half a mile, evidently exaggerated). From the keel to the central deck the height was six cubits and a half (thirteen *tāl*) to stabilize the equilibrium of a ship. The bamboo-poles for plying the vessels were also measured with thread. More serious work, however, commenced with the construction of the hold of a ship. The wood ordinarily chosen for the purpose was known as "*Manapaban*," noted for imparting swiftness of the wind to the ship on slightest wish. Very strong pieces of this timber were joined together with the help of iron-nails. Joints were covered by soldering to avoid saline water corroding the iron-nails. In this way the construction of the hold was completed. When it was

finished the metallic sheets (pith-pāt) were fitted and the mat doors (jhāp) fixed up. Then ‘*Māthākāstha*,’ or, ‘*galui*’ (prow) was made, decorated with golden and silver flowers. The principal cabin was built, after the deck composed of wooden planks had been fitted up (pātātan). This chief cabin (*Raighar*) was beautifully decorated with rows of artificial flower garlands. On the vessel the mast (*Malum wood*) was duly fitted. The helm (pā’wāl) and its auxiliary piece of timber (*jhokābāri*) were also not forgotten. When these had been finished, a nicely ornamented shed was built on the ship. It had rows of ‘*chāmar*’ (chowri) and festoons of various types which made the vessel look pretty. Finally, the eyes of the figure on the prow of the ship were bedecked with jewels resembling the moon. This completed the building of the ship.

A similar description of ships as found in *Kabikankan* is given below (pp. 221-222):—

“Seven ‘*dingās*,’ or, vessels were built by Biswakarmā and his son Dārubrahmā with the assistance of Hanumān. The mighty hero Hanumān began to saw the wood of various denominations such as ‘*Sāl*,’ ‘*tāl*,’ ‘*Kāthāl*,’ ‘*peal*,’ ‘*gāmbhāri*,’ and, ‘*lamāl*.’ The architect Dārubrahmā in the meantime made the iron nails. They made beautiful vessels each of which were hundred yards in length and twenty yards in breadth. The prow of each resembled the head of a *Makara* fish. It was made of ivory and the eye-balls were made of precious gems. First, the ship ‘*Madhukara*’ was constructed. In its central part there was the ‘*raighar*’ containing *rājāsan* or, the principal cabin for the merchant. A nook was reserved for the helmsman and the back part as the strong room for keeping treasures. There was also the mast on the vessel. Of the jack and the teakwoods *danda-kerwal* or the oars were made and a

helm was fitted to the prow of each vessel. The seven vessels were named :—

- (i) Madhukarā (the Bee)—the flagship.
- (ii) Guarekhi (its prow resembled the head of a Lion).
- (iii) Ranajayā (the Victory).
- (iv) Ranavima (the Terrible in war).
- (v) Mahakāya (the Titanic).
- (vi) Sarvadhara (the All-container).
- (vii) Nātsālā (the Amusement-hall).

The following were the principal parts of a vessel :—

- (i) Dārā (helm) or *patwāl*.¹
- (ii) Mālumkāstha (the mast).
- (iii) Talā (hold).
- (iv) Māthākāstha (prow).
- (v) Chhaighar (shed).
- (vi) Pātātan (deck).
- (vii) Dandakerwāl (Oar).
- (viii) Bangsakerwāl or Dhavaji (bamboo-pole).
- (ix) Fāns (chord).
- (x) Nangar (anchor).
- (xi) Pāl (sail).
- (xii) Dārā (Keel).

The above names are still used to convey the meaning they did in ancient Bengal. It would be interesting for the purpose of comparative study to find out if some of these technical words were analogous to those used in other parts of India in the literature of ship-building.

In the description, given above, we find elaborate details of the different parts of a ship built in those days. Exaggerated descriptions are, however, apparent, in the writings of Bijoy Gupta specially, who flourished

¹ Dara in the present dialect of the countryside means an oar, but in our old books it has oftentimes the meaning given above.

in the fifteenth century, when ship-building as an art was practically abandoned in Bengal. But though there is much of legend in the stories, the old traditions were not altogether lost sight of. Ships of considerable tonnage for commercial purposes were surely still being constructed. See Kabikankan, p. 220. "If hundred carpenters work for a whole year, only one vessel is constructed"; see Bangsidas, p. 285, "sixteen hundred carpenters cut the branches of the '*Manpaban*' tree and piled them up in rows"; see also Bangsidas, p. 282, "By the command of the king, the chief engineer Giribar and the admiral Gopal started with sixteen hundred carpenters." The descriptions of voyages often go to show that ships of titanic dimensions used to be constructed in Bengal even if sufficient allowances are made for poetic exaggerations. In Bijoy Gupta we find the following:—

"First was launched the *Madhukara*. On it the millionaire Chand took his residence. It was followed by the ship called '*Biju-siju*.' This ship was so big that it broke the crooked projections of the banks levelling them on its way owing to its very big dimensions. Then sailed the *Guarekhi*. It was so high that the city of Lanka, situated a long way off, was visible from its deck. After it, sailed, "*Bharar-Patua*." All the Tamil people were on board this ship. It was followed by "*Sankha-chur*" (the Shell-crowned). It was so gigantic a ship that its sides seemed to touch two opposite shores of big rivers and its bottom the ground under water. Next started "*Ajayshelpet*" (the Invincible steel-bottomed). There was arrangement for a big fair on it. Then could be seen the ship '*Udaytara*' (the Morning star); its length was so extraordinary that when half the portion suffered from rain, the other half enjoyed sunshine. Then sailed '*Tiathuti*' (the Parrot-beaked). It was full of merchandise, such as jute

and coarse blankets, etc. Then followed *Dhabal* (the white). It was so big that it moved slowly and often stopped owing to its great bulk when it was to be set in motion again by sacrificing a hundred goats to propitiate the sea-god. Then sailed '*Kedar*' (the great God Siva). Before reaching the shore it had to be worshipped with incense and *Panchapradip* as is done in a temple when performing the evening service. Then came "*Pakshiraj*" (the Prince of birds). Many fruit trees of considerable size were there for use of the people on board the ship. Then was launched the ship "*Bhimaksha*" (the fierce-eyed). Upon it was taken conch shells numbering fourteen lacs. It was followed by the vessel *Sankhatali* (the treasure of shells). Its principal parts were made of sandal wood. Behind it sailed the vessel '*Ajlā-kajlā*.' It used to devour a hundred goats at every turn of the river (meaning that its size was so big that at every turn its motion had to be ensured by a sacrifice of hundred goats). Thus one by one the ships sailed with the merchant for *Gangāsāgar*."

The following description taken from Bangsidas (p. 288) may also be noted :—

"The first vessel which Chand launched on water was '*Madhukara*.' Its deck was filled with earth, so that it took the appearance of land upon which a small town with markets were established. The foredeck was reserved for worship. A tank of fresh water was not wanting in it with aquatic plants on its surface to keep it cool and with fishes of various descriptions. A vegetable and a flower garden completed the outfit of this wonderful ship. The merchant Chand ascertained the cost of this ship to be fourteen lacs of rupees as may be gathered from what he said to his treasurer Govinda. He furthermore said that the merchandise on board this vessel was worth the same amount.

See also Bangsidas, p. 319 :—

First started *Sankhachur* followed by “*Chhatighati*” (the ship of wares) which was filled with earthen wares. Then “*Kajal-rekhi*” (Lined with collyrium), “*Durgabar*” (the Boon of Durga), and “*Manikyamerua*” (the Diamond-crowned) sailed one after another. The last was so big that it had to be driven by sixteen hundred oarsmen. Then sailed ‘*Rajballav*’ (the favourite of the king), ‘*Hansakhal*’ (the Royal Duck), and ‘*Sagarfena*’ (the sea-foam) one behind the other. The last one was full of tamil soldiers. Behind these ships came ‘*Udaygiri*’ (the mountain of the rising sun) followed by “*Lakshipashā*” (the abode of the harvest goddess). In the latter ship the priest Subhai took up his residence with all the requisites for worshipping *Hara-Gauri*. The next two vessels were “*Udaytara*” (the Morning Star) and “*Gangaprasad*” (the Favour of the Ganges) respectively. The last one of the fourteen ships was the flagship termed “*Madhukara*” (the Bee) which was the best of the lot. In it the merchant Chand, the lord of the fleet, established his quarters with his five advisers. During the voyage the crew sang *sari* songs (a kind of chorus) all the while.”

Another description is given below from Kabikankan, p. 191 :—

“First was recovered from water the ship “*Madhukara*.” Its drawing-room was made of solid gold. Then came the turn of *Durgābar*. It was full of *Gābar* or sailors. Then came to sight the ship “*Guarekhi*.” Its mast (*Malumwood*) might be seen from a distance of six miles. Another ship which rose up was named *Sankhachur*. It was so big that it had a breadth of eighty yards. Another ship named *Chandrapal* was also recovered from water. Its breadth was so great that when sailing its sides almost touched the banks of the river. The

seventh and the last vessel was named *Chhatimati* which had a cargo of rice."

Inspite of the exaggerated descriptions of the poets that we ordinarily come across about big vessels it must not be construed that smaller crafts were lost sight of by them. We find in Bangsidas, p. 320, the following, "The admiral Gopal who sailed first had with him forty-two small boats (*hat nāo*). The construction of the river boats and sea-going ships are now precisely of the same type as we find it in the old literature, and the nomenclature adopted in the past was on the whole the same as we use it now. It seems that the sea-going vessels and the rivercrafts were built on the same principle. Even the other day a coasting vessel named *Aminakhatun* and its sister vessels of considerable tonnage were built by a merchant of Chittagong with the help of local carpenters and mechanics and the method of building they adopted, appears to be the same as it was done in the past. The strong build and the high speed of these sailing ships were perhaps not inferior to those of similar ships used in England in the days of Nelson. The coincidence of keeping a flagship in the mercantile marine as we find to-day in the navy of the civilised nations is curious indeed. The numbers of ships, seven and fourteen, which the merchants of old generally adopted in completing a fleet were perhaps due to the notion that these numbers were auspicious. For a fuller information about the old Bengali vessels reference may be made to the Folk-Literature of Bengal, pp. 65, 75 and 249.

Among the crew the following may be noted :—

- (1) Gābar (sailors) who were of two classes.
 - (a) Mānjhi or Oarsmen. (b) Dāri or Karnadhār (helmsmen).
- (2) Sutradhar (carpenter).

- (3) Karmakār (blacksmith).
- (4) Pāik (foot soldiers).
- (5) Dubāri (Diver).
- (6) Mirbahar (admiral).
- (7) Kārikar (craftsman of various description).
- (8) Kārāri (helmsman and captain).

Gābar.—A sailor. The caste from which boatmen were generally recruited is still known in Bengal as *Gābar*. They were exceptionally sturdy as the term "*Gaithyār-gābar*," applied to them, signifies great physical strength. The sailors used to sing a chorus called *sāri* when plying their oars. See History of Bengali Language and Literature, p. 396. See also *Satyanarayana Punthi* edited by Abdul Karim and *Manasa Mangal* poems for *Gābar*. The sailors were mainly East Bengal people. See Kabikankan, pp. 198 and 207-208. For plying vessels the *Gābars* used 'Danda' (helm), *Danda kerwāls* (oars), *Bangsakerwāls* (bamboo-poles) and *Fāns* (chords). See p. 195, Kabikankan. See also Kabikankan, pp. 227, 228, 207, 229, 234, 236, 194 for *Gabar*, *Kerwāls*, etc.

Sutradhar (carpenter).—Carpenters were needed for repairs and joining of parts; they supplied the necessary crew corresponding to an Engineering staff maintained on board a modern ship.

Karmakār (Blacksmith).—Blacksmiths were engaged in building a ship and as their services were considered indispensable, they were taken on board the ships.

Pāik (foot-soldiers).—They were taken on board the vessels engaged in mercantile pursuits due perhaps to the insecurity of the age. They were engaged to protect the valuable merchandise against any possible attack of pirates or hostile foreigners. The soldiers engaged belonged to different countries. See Bangsidas, p. 329. Mention is found of the Telegu soldiers employed by

the Bengalis in the *Manasā-mangal* and the *Dharma-mangal* poems.

Dubāri, or divers.—They accompanied sea-going merchant vessels to ascertain if there was anything wrong in that part of a vessel which remained under the water. See *Bangsidas*, p. 329.

Mirbahar (Admiral).—It is an abbreviation of the Arabic term *Amir-al-Bahar* meaning an admiral of a fleet. The admirals would accompany not only warships but also armed merchantmen as appears from the description of Chand's voyage of trade. In *Bangsidas* we find the admiral Gopal accompanying the expedition of carpenters in quest of *Manapaban* wood perhaps to protect them from any possible aggression. This precaution was necessary to provide against the insecurity of the age.

Merchandise.—As for merchandise on board the Bengali vessels it may be said that our poets described them as mainly intended for export to *Pātan* and *Singhal*. A system of barter was generally resorted to and fraud played by the Bengali merchants on foreigners of questionable civilization was a theme of our poets on which all of them wrote in the same strain. We find occasional mention of merchandise, but the prices are sometimes ludicrously exaggerated, as during the time when these Bengali works were written, sea-voyage was reduced to a vague tradition in which facts and fiction were hopelessly blended together. Still we give below two lists which no doubt contain some elements of truth. According to *Bangsidas* it was the Bengali merchants who introduced cocoanuts and betels in some foreign countries. The stories given seem, however, to be mere legend.

A.

Items of Bengali merchandise.	Articles of foreign countries.
in exchange of	
(1) Betel leaves	... Ten emeralds for each leaf.
(2) Betel-nut	... Ten gems.
(3) Lime	... Quick-silver.
(4) Catechew	... Gorachana (a bright yellow pigment).
(5) Cardamom	... Pearl.
(6) Satabari Kámeswar (<i>Asparagus racemosus</i>)	Musk.
(7) Fruits	... Golden bricks, bells, etc.
(8) Vegetable roots	... Diamond.
(9) Pulses	... Corals.
(10) Onions and garlies	... Maces.
(11) Camphor	... "Bakhar."
(12) Water weeds	... Diamond.
(13) <i>Dolichos gladiatus</i> (Makhana)	... Ruby.
(14) Goats and sheep	... Golden does.
(15) Radish	... Ivory.
(16) Dry fish	... Sandal wood.
(17) Sugarcane	... Royal maces (Nabadanda —sign of royalty).
(18) Jute	... Chowrie (chāmar).
(19) Wooden utensils	... Golden and silver utensils.
(20) Wooden furniture	... Golden furniture.
(21) Earthenwares	... Bell-metal utensils.
(22) Oil and clarified butter	Quick-silver.
(23) Kumkum	... Jarful of honey.
(24) Puppy	... String of golden bells.
(25) Mosquito curtains, bed- dings, trousers, etc., all made of gunny cloth	Silken clothes and curtains, etc.

See Bangsidas, p. 314, for the above list.

B.

Items of Bengali merchandise.		Articles of foreign countries.
	in exchange of	
(1) Deer	...	Horse.
(2) "Biranga "	...	Clove.
(3) Suntha	...	Tanka (a kind of wood apple, <i>Feronia Elephantum</i>).
(4) Ape	...	Elephant.
(5) Pigeon	...	Suā (A bristly Caterpillar).
(6) Fruits	...	"Jayfal."
(7) Bahara	...	Betel-nut.
(8) Jute	...	White chowrie (chāmar).
(9) Glass	...	Emerald.
(10) Sea salt	...	Rock salt.
(11) Dhuti (cloth)	...	Pots.
(12) Oystershell	...	Pearl.
(13) Harital	...	Diamond.
(14) "Joani."	...	"Jira."
(15) "Chua."	...	Sandal-paste.
(16) Sheep	...	Horse.

See Kabikankan Mukundaram's Chandi Kabya, p. 191—Dhanapati's exchange of merchandise in Ceylon—for the above list. The exchange of commodities here seems to be somewhat more reasonable than that to be found in Bangsidas.

The Bengali merchants carried on trade with Ceylon and Patan in Gujrat and visited the following notable ports:—

1. Puri.
2. Kalinga or Calingapatam.
3. Chilkachuli or Chicacole in Madras Presidency.
4. Banpur.
5. Setubandha Rameswar.

6. City of Lanka (in the site of Lanka Singhal or Ceylon).
7. Nilacca or Laccadives.
8. Patan.

One of the chief places outside India visited by the Bengali merchants was the Laccadives. Mention is made also of *Pralamba*, *Nakut*, *Aheelanka Chandrasalya* island and *Abartana* island which we cannot identify but which undoubtedly lay outside our country. Vivid description of the coasting voyage of the Bengali vessels from *Saptagrām* (an inland port of Bengal) to Patan in Gujrat by doubling the Cape of Comorin, is found in the *Manasāmangal* poem of Bangsidas. In *Chandikāvya* by Kabikankan Mukundaram we find accounts of mercantile adventurers of Bengal related in glowing terms. The lists of ports, both Indian and foreign, and the condition of sea-voyage tally in both these works.

In Bangsidās we meet with the following description of the voyage of Chand, the merchant. In spite of fancy and exaggeration a rough idea of the sea-routes and ports may be gleaned from it.

“The merchant started for South Patan. There were great celebrations and festivities at the city of Champaka. All the ships sailed one after another; at the head of the Vanguard was the admiral Gopal with forty-two small vessels. After leaving his own territory Chand passed the following places in succession—*Kāmārhati*, *Madhyānagar*, *Pratupgarh*, *Gopālpur* and *Rāmānagar*. He then reached *Kālidah Sāgar* which he crossed leaving to the right *Gandharvapur* and to the left *Birnagar*. Then the merchant reached the mouths of the Ganges after passing *Kāmeswar*, *Mandarerthana*, *Pichalta* and *Rambishnupuri* one after another. At Gangasagar Chand performed worship and sacrificed goats. After leaving Champaknagar the ships were on the voyage for five months. The

merchant passed through many difficult places after having reached the sea. He passed Utkal and Kalinga on his right. Crabs, lobsters, leeches and crocodiles obstructed his passage through the malice of *Manasā Devi*. At last the merchant reached the golden *Lanka* surrounded by golden walls. Chand here saw the *Rakshasa* king and received his pass-port before proceeding further. Then he left Lanka on his right and passed the Malaya mountain near Cape Comorin. He passed also *Bijoynagar* (Ceylonese?) then ruled by King Ahi. The next important place which the merchant passed was *Parasuramtirtha*. Leaving this place the merchant reached the vast sea known as the "*Nilaccarbunk*" (lit. bend of sea near Nilacca—perhaps Laccadives). Reaching this sea the crew felt giddy at the vast expanse of water and deep sound of the waves, big as mountains. They almost lost their way but through the expert direction of Captain Dulai the vessels were steered rightly. It was by looking to the stars that Dulai could keep the right course. After much trouble the merchant Chand and his companions reached the city of *Pātan* then ruled by King Chandraketu. (See Bangsidas, pp. 318-338.)

On Chand's return from *Pātan* he passed the Laccadives sea, the Vindya ranges, Lanka, Setubandha Rameswar, the gulfs were infested with crocodiles, leeches, etc., and reached Kalidahsagar where he experienced heavy storm. (See Bansidas, pp. 396-399.) "

The above description leads us to think that *Pātan*, once a celebrated city in Gujrat, was much frequented by the Bengali merchants who reached the place by sea crossing the Bay of Bengal, part of Indian ocean and the Arabian Sea. The voyage was probably a coasting one and Ceylon which stood mid-way between Bengal and Gujrat by the sea route, was a favourite place of

commerce for the merchants. Pātan is not an inland city similar to that of Tamralipti or Tamluk which was once one of the greatest seaports of Bengal. *Pātan* though means a city such as *Lalitpātan* yet the frequent mention of this particular Pātan and the way leading to it makes us think that it is no other than the Pātan or Somnāth Pātan of Gujrat and not a fanciful creation of our poets.

As for the foreign countries and ports, it seems our merchants frequented the islands and ports of the Bay of Bengal and the Arabian Sea as have already been seen. We see the following in Bijoy Gupta's *Manasāmangal* :—

“ O, merchant, listen. In the north King Mukteswar reigns. It is very difficult to comprehend the ways of his people. They take the seeds of pepper for rice. The king of the east is known as Bidyā-Sanga. The greater the bulk of a person the more respect is shown to him. The people are all degraded and the social customs are in a most pitiable condition. Marriage laws are not at all strict as brothers often exchange their wives. Even a brother marries his sister in that land. The women there enjoy complete freedom and use coloured cloth specially to cover the breast. Caste system is not observed at all. In the west the people are barbarous. They bore their ears, show laxity of caste distinction and use ornaments on the neck. They do not give the girls in marriage unless they are sixteen and even then they put the married girl for some time in priest's house in lieu of his fee. A married girl even keeps the house of her husband's sister's husband. In case of any issue being born it shares the property on both sides.¹

¹ The peculiar customs regarding inheritance such as inheritance of nephews as found in Bangsidas are still current among the Nairs. Preserving dead bodies mentioned in the same work show the knowledge of Buddhistic conditions. See Type set, p. 234.

Now hear the condition of Patan or the South Patan. Its king is *Bikrom Keshari*. The people of this land is very rich. They keep jars full of gems. In their land conch shells, pearls, etc., are abundantly found as sea waves fling them frequently on the shore in particular phases of the moon. Even the poor there owned oysters and pearls."

The above lines though full of grotesque fiction seem to contain some grains of truth in them. By the north the poet perhaps indicates the foreign countries to north-east of Bengal. From Chittagong onwards to China the people are fond of taking excessive quantity of pepper with their meal. By the east the poet perhaps means the Buddhist Burma and the adjoining countries where owing to the influence of Buddhism, caste system is ignored and marriage laws are less rigorous. The Burmese women are very fond of coloured garments. Freedom of women is also to be found in Burma. By the western country the poet possibly means Madras Presidency which lies to the south-west of Bengal. As for Pātan, it may be said that, it was a rich city as otherwise Bengali merchant vessels would not be described as visiting that place for nothing.

See also *Kabikankan*, pages 195-196, for voyages of the Bengalees:—

"After the performance of the proper ceremonies before sailing, the merchant Dhanapati passed the following places,—Bhowsingerghat, Matiarisafar, Chandi-gachha, Bolanpur, Purathan, Nabadwip, Mirzapur, Ambna, Santipur, Guptipara, Ula, Khishma, Mahespur, Fulia and Halisahar—all by the side of the Ganges. Then he reached the very celebrated inland port of Bengal known as *Saptagram* by the side of the Tribeni. Here the poet incidentally praised this port and gave it a superior place among the following ports and places (some

of which are Indian and some foreign) known to the poet. They are the ports of Kalinga, Trailanga, Anga, Banga, Carnut, Mahendra, Magadha, Maharastra, Gujrat, Barendra, Vindhya, Pingal, Utkal, Dravir, Rarh, Bijohnagar, Maitra, Dwaraka, Kasi, Kankhal, Kekaya, Purabak, Anayuk, Godabari, Gaya, Sylhet, Kamrup, Koch, Hangar, Trihatta, Manika, Fatika, *Lanka*, *Pralamba*, *Nakutta*, Bagar, *Malay* (Indian), Kurukshetra, Bateswari, *Ahu Lanka*, Sibatatta, Mahanatta and Hastina, etc. According to the poet, the merchants of the above places visit Saptagram but the merchants of Saptagram do never visit those ports and places. (These prove the exaggerated notion of the poet about Saptagram).

At Saptagram the merchant took on board sufficient drinking water for his voyage; then he passed some other places of note by the river banks such as Nimaitirtha, Betarah, Bagan, Kalighat, Omulinga, Chhatrabhoga, Kalipar, Himai, Hetagarh, Sanketamadhaba, Madanmalla, Birkhana, Kalahati, and Dhuligram. On the way he experienced much storm on the river Magra. It took the merchant twenty days to reach the canal of *Angarpur*. Then his vessels entered the sea adjoining the country of the Dravidas. The first place of note was Puri celebrated for its temple of Jagannath. Then the merchant visited Chilkachuli, or Chicacole. Next ports of note were Balighata and Banpur which were left very soon. Then they reached the land of the Firinghees (Portuguese). They passed this place stealthily at night as they were afraid of these people who were very strong for their fleet of warships which were known as Harmada (Portuguese Armada, the Portuguese being very strong in ships in these parts). Dhanapati then passed some seas infested with crabs, snakes and crocodiles, etc., like Chand. After much difficulty he reached *Lanka*. Before reaching Lanka Dhanapati's vessels touched

Setubandha-Rameswar and crossed *Kalidaha* or Black Sea."

It is peculiar that *Kalidaha* which Bangsidas mentions to be near Bengal, Kabikankan places near Ceylon. It may be that any expanse of blue sea was taken by them to be *Kalidaha*. As for the mention of the Harmadas it may safely be said that they are matters of history. The Portuguese pirate vessels were for some time the curse of the eastern sea.

In the voyage of Srimanta, son of Dhanapati, we come across two islands namely, Chandrasalya and Abar-tana, both lying on the way to Ceylon. We cannot locate these two islands as we cannot locate Banpur "en route" to Chand's voyage for obvious reasons. Though there is evidently much exaggeration about the size of the ships, it is quite probable that the ships of the Bengali merchants were often of enormous size, for enormity of size was the fashion of the time. The Bengali poets had some traditions of the past, to which they added much that they derived from their imaginations.



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From the records, I have come across in course of my researches in the field of old Bengali literature, it shows that ship-building reached a high degree of perfection both in regard to workmanship and efficiency in ancient Bengal when the sea-going ships were actively engaged in promoting the prosperity of the province by conducting commercial intercourse with various countries both within and outside India.

The wood required for the construction of ships were teak, *gāmbhāri*, *tamāl*, *peal*, jackwood, etc. But it seems, the wood of the fabled tree *Manapaban* was, however, best for the purpose. The name itself is poetic, signifying the utmost speed that a vessel would acquire if built with such wood. It was, however, foreign to Bengal and very difficult to be secured as we learn from an elaborate description in Bangsidas (p. 283).

In building a vessel the first work to be done was a ceremony known as 'Dārābindhā' or thrusting of a gold nail (Sonarjal) to the keel (Dārā) with the help of a silver hammer (hātur). It was done by the owner himself. After this ceremony, the actual work of construction was to begin. First a measurement of the vessel was to be taken. Then the keel (Dārā) was to be carefully

constructed with which strong pieces of timber were joined with the help of iron-nails. Next the 'galui' (prow) was to be built. This finished the hold of a vessel. The deck, the *pātātan* (pieces of timber joined to the keel) and the shed were also made. After these, the construction of helm and rudders, and decoration-work made the building of a ship complete. It may be noted that the prow took the appearance of a peacock or a Cuka bird or some other fancy shape specified in the works on art and the ships were accordingly known as "*Maur-pankhi*," "*Cukapankhi*," etc. Mention of seven types of prows representing the shapes of a lion, a buffalo, a serpent, an elephant, a tiger and a bird, is found in old Sanskrit literature, such as *Juktikalpataru*; see also *Viswakosh*, Vol. X, p. 461.

A vivid description of the construction of a vessel is found in *Bangsidas*, p. 286. An idea of this is given below :—

The Lord of Champaka (the merchant Chānd) constructed some vessels for which purpose he himself performed the ceremony of gold nailing (*Sonār-jal* or *jalai*). The length of the vessel was fixed at a thousand yards (more than half a mile, evidently exaggerated). From the keel to the central deck the height was six cubits and a half (thirteen *tāl*) to stabilize the equilibrium of a ship. The bamboo-poles for plying the vessels were also measured with thread. More serious work, however, commenced with the construction of the hold of a ship. The wood ordinarily chosen for the purpose was known as "*Manapaban*," noted for imparting swiftness of the wind to the ship on slightest wish. Very strong pieces of this timber were joined together with the help of iron-nails. Joints were covered by soldering to avoid saline water corroding the iron-nails. In this way the construction of the hold was completed. When it was

finished the metallic sheets (pith-pāt) were fitted and the mat doors (jhāp) fixed up. Then ‘*Māthākāstha*,’ or, ‘*galui*’ (prow) was made, decorated with golden and silver flowers. The principal cabin was built, after the deck composed of wooden planks had been fitted up (pātātan). This chief cabin (*Raighar*) was beautifully decorated with rows of artificial flower garlands. On the vessel the mast (*Malum wood*) was duly fitted. The helm (pā’wāl) and its auxiliary piece of timber (*jhokābāri*) were also not forgotten. When these had been finished, a nicely ornamented shed was built on the ship. It had rows of ‘*chāmar*’ (chowri) and festoons of various types which made the vessel look pretty. Finally, the eyes of the figure on the prow of the ship were bedecked with jewels resembling the moon. This completed the building of the ship.

A similar description of ships as found in *Kabikankan* is given below (pp. 221-222):—

“Seven ‘*dingās*,’ or, vessels were built by Biswakarmā and his son Dārubrahmā with the assistance of Hanumān. The mighty hero Hanumān began to saw the wood of various denominations such as ‘*Sāl*,’ ‘*tāl*,’ ‘*Kāthāl*,’ ‘*peal*,’ ‘*gāmbhāri*,’ and, ‘*lamāl*.’ The architect Dārubrahmā in the meantime made the iron nails. They made beautiful vessels each of which were hundred yards in length and twenty yards in breadth. The prow of each resembled the head of a *Makara* fish. It was made of ivory and the eye-balls were made of precious gems. First, the ship ‘*Madhukara*’ was constructed. In its central part there was the ‘*raighar*’ containing *rājāsan* or, the principal cabin for the merchant. A nook was reserved for the helmsman and the back part as the strong room for keeping treasures. There was also the mast on the vessel. Of the jack and the teakwoods *danda-kerwal* or the oars were made and a

helm was fitted to the prow of each vessel. The seven vessels were named :—

- (i) Madhukarā (the Bee)—the flagship.
- (ii) Guarekhi (its prow resembled the head of a Lion).
- (iii) Ranajayā (the Victory).
- (iv) Ranavima (the Terrible in war).
- (v) Mahakāya (the Titanic).
- (vi) Sarvadhara (the All-container).
- (vii) Nātsālā (the Amusement-hall).

The following were the principal parts of a vessel :—

- (i) Dārā (helm) or *patiwāl*.¹
- (ii) Mālumkāstha (the mast).
- (iii) Talā (hold).
- (iv) Māthākāstha (prow).
- (v) Chhaighar (shed).
- (vi) Pātātan (deck).
- (vii) Dandakerwāl (Oar).
- (viii) Bangsakerwāl or Dhavaji (bamboo-pole).
- (ix) Fāns (chord).
- (x) Nangar (anchor).
- (xi) Pāl (sail).
- (xii) Dārā (Keel).

The above names are still used to convey the meaning they did in ancient Bengal. It would be interesting for the purpose of comparative study to find out if some of these technical words were analogous to those used in other parts of India in the literature of ship-building.

In the description, given above, we find elaborate details of the different parts of a ship built in those days. Exaggerated descriptions are, however, apparent, in the writings of Bijoy Gupta specially, who flourished

¹ Dara in the present dialect of the countryside means an oar, but in our old books it has oftentimes the meaning given above.

in the fifteenth century, when ship-building as an art was practically abandoned in Bengal. But though there is much of legend in the stories, the old traditions were not altogether lost sight of. Ships of considerable tonnage for commercial purposes were surely still being constructed. See Kabikankan, p. 220. "If hundred carpenters work for a whole year, only one vessel is constructed"; see Bangsidas, p. 285, "sixteen hundred carpenters cut the branches of the '*Manpaban*' tree and piled them up in rows"; see also Bangsidas, p. 282, "By the command of the king, the chief engineer Giribar and the admiral Gopal started with sixteen hundred carpenters." The descriptions of voyages often go to show that ships of titanic dimensions used to be constructed in Bengal even if sufficient allowances are made for poetic exaggerations. In Bijoy Gupta we find the following:—

"First was launched the *Madhukara*. On it the millionaire Chand took his residence. It was followed by the ship called '*Biju-siju*.' This ship was so big that it broke the crooked projections of the banks levelling them on its way owing to its very big dimensions. Then sailed the *Guarekhi*. It was so high that the city of Lanka, situated a long way off, was visible from its deck. After it, sailed, "*Bharar-Patua*." All the Tamil people were on board this ship. It was followed by "*Sankha-chur*" (the Shell-crowned). It was so gigantic a ship that its sides seemed to touch two opposite shores of big rivers and its bottom the ground under water. Next started "*Ajayshelpet*" (the Invincible steel-bottomed). There was arrangement for a big fair on it. Then could be seen the ship '*Udaylara*' (the Morning star); its length was so extraordinary that when half the portion suffered from rain, the other half enjoyed sunshine. Then sailed '*Tiathuti*' (the Parrot-beaked). It was full of merchandise, such as jute

and coarse blankets, etc. Then followed *Dhabal* (the white). It was so big that it moved slowly and often stopped owing to its great bulk when it was to be set in motion again by sacrificing a hundred goats to propitiate the sea-god. Then sailed '*Kedar*' (the great God Siva). Before reaching the shore it had to be worshipped with incense and *Panchapradip* as is done in a temple when performing the evening service. Then came "*Pakshiraj*" (the Prince of birds). Many fruit trees of considerable size were there for use of the people on board the ship. Then was launched the ship "*Bhimaksha*" (the fierce-eyed). Upon it was taken conch shells numbering fourteen lacs. It was followed by the vessel *Sankhatali* (the treasure of shells). Its principal parts were made of sandal wood. Behind it sailed the vessel '*Ajlā-kajlā*.' It used to devour a hundred goats at every turn of the river (meaning that its size was so big that at every turn its motion had to be ensured by a sacrifice of hundred goats). Thus one by one the ships sailed with the merchant for *Gangāsāgar*."

The following description taken from Bangsidas (p. 288) may also be noted :—

"The first vessel which Chand launched on water was '*Madhukara*.' Its deck was filled with earth, so that it took the appearance of land upon which a small town with markets were established. The foredeck was reserved for worship. A tank of fresh water was not wanting in it with aquatic plants on its surface to keep it cool and with fishes of various descriptions. A vegetable and a flower garden completed the outfit of this wonderful ship. The merchant Chand ascertained the cost of this ship to be fourteen lacs of rupees as may be gathered from what he said to his treasurer Govinda. He furthermore said that the merchandise on board this vessel was worth the same amount.

See also Bangsidas, p. 319 :—

First started *Sankhachur* followed by "*Chhatighati*" (the ship of wares) which was filled with earthen wares. Then "*Kajal-rekhi*" (Lined with collyrium), "*Durgabar*" (the Boon of Durga), and "*Manikyamerua*" (the Diamond-crowned) sailed one after another. The last was so big that it had to be driven by sixteen hundred oarsmen. Then sailed '*Rajballav*' (the favourite of the king), '*Hansakhal*' (the Royal Duck), and '*Sagarfena*' (the sea-foam) one behind the other. The last one was full of tamil soldiers. Behind these ships came '*Udaygiri*' (the mountain of the rising sun) followed by "*Lakshipashā*" (the abode of the harvest goddess). In the latter ship the priest Subhai took up his residence with all the requisites for worshipping *Hara-Gauri*. The next two vessels were "*Udaytara*" (the Morning Star) and "*Gangaprasad*" (the Favour of the Ganges) respectively. The last one of the fourteen ships was the flagship termed "*Madhukara*" (the Bee) which was the best of the lot. In it the merchant Chand, the lord of the fleet, established his quarters with his five advisers. During the voyage the crew sang *sari* songs (a kind of chorus) all the while."

Another description is given below from Kabikankan, p. 191 :—

"First was recovered from water the ship "*Madhukara*." Its drawing-room was made of solid gold. Then came the turn of *Durgābar*. It was full of *Gābar* or sailors. Then came to sight the ship "*Guarekhi*." Its mast (*Malumwood*) might be seen from a distance of six miles. Another ship which rose up was named *Sankhachur*. It was so big that it had a breadth of eighty yards. Another ship named *Chandrapal* was also recovered from water. Its breadth was so great that when sailing its sides almost touched the banks of the river. The

seventh and the last vessel was named *Chhatimati* which had a cargo of rice."

In spite of the exaggerated descriptions of the poets that we ordinarily come across about big vessels it must not be construed that smaller crafts were lost sight of by them. We find in Bangsidas, p. 320, the following, "The admiral Gopal who sailed first had with him forty-two small boats (*hat nāo*). The construction of the river boats and sea-going ships are now precisely of the same type as we find it in the old literature, and the nomenclature adopted in the past was on the whole the same as we use it now. It seems that the sea-going vessels and the rivercrafts were built on the same principle. Even the other day a coasting vessel named *Aminakhatun* and its sister vessels of considerable tonnage were built by a merchant of Chittagong with the help of local carpenters and mechanics and the method of building they adopted, appears to be the same as it was done in the past. The strong build and the high speed of these sailing ships were perhaps not inferior to those of similar ships used in England in the days of Nelson. The coincidence of keeping a flagship in the mercantile marine as we find to-day in the navy of the civilised nations is curious indeed. The numbers of ships, seven and fourteen, which the merchants of old generally adopted in completing a fleet were perhaps due to the notion that these numbers were auspicious. For a fuller information about the old Bengali vessels reference may be made to the Folk-Literature of Bengal, pp. 65, 75 and 249.

Among the crew the following may be noted:—

- (1) Gābar (sailors) who were of two classes.
 - (a) Mānjhi or Oarsmen. (b) Dāri or Karnadhār (helmsmen).
- (2) Sutradhar (carpenter).

- (3) Karmakār (blacksmith).
- (4) Pāik (foot soldiers).
- (5) Dubāri (Diver).
- (6) Mirbahar (admiral).
- (7) Kārikar (craftsman of various description).
- (8) Kārāri (helmsman and captain).

Gābar.—A sailor. The caste from which boatmen were generally recruited is still known in Bengal as *Gābar*. They were exceptionally sturdy as the term "*Gaithyār-gābar*," applied to them, signifies great physical strength. The sailors used to sing a chorus called *sāri* when plying their oars. See History of Bengali Language and Literature, p. 396. See also *Satyanarayana Punthi* edited by Abdul Karim and *Manasa Mangal* poems for *Gābar*. The sailors were mainly East Bengal people. See Kabikankan, pp. 198 and 207-208. For plying vessels the *Gābars* used 'Danda' (helm), *Danda kerwāls* (oars), *Bangsakerwāls* (bamboo-poles) and *Fāns* (chords). See p. 195, Kabikankan. See also Kabikankan, pp. 227, 228, 207, 229, 234, 236, 194 for *Gabar*, *Kerwals*, etc.

Sutradhar (carpenter).—Carpenters were needed for repairs and joining of parts; they supplied the necessary crew corresponding to an Engineering staff maintained on board a modern ship.

Karmakār (Blacksmith).—Blacksmiths were engaged in building a ship and as their services were considered indispensable, they were taken on board the ships.

Pāik (foot-soldiers).—They were taken on board the vessels engaged in mercantile pursuits due perhaps to the insecurity of the age. They were engaged to protect the valuable merchandise against any possible attack of pirates or hostile foreigners. The soldiers engaged belonged to different countries. See Bangsidas, p. 329. Mention is found of the Telegu soldiers employed by

the Bengalis in the *Manasā-mangal* and the *Dharma-mangal* poems.

Dubāri, or divers.—They accompanied sea-going merchant vessels to ascertain if there was anything wrong in that part of a vessel which remained under the water. See *Bangsidas*, p. 329.

Mirbahar (Admiral).—It is an abbreviation of the Arabic term *Amir-al-Bahar* meaning an admiral of a fleet. The admirals would accompany not only warships but also armed merchantmen as appears from the description of Chand's voyage of trade. In *Bangsidas* we find the admiral Gopal accompanying the expedition of carpenters in quest of *Manapaban* wood perhaps to protect them from any possible aggression. This precaution was necessary to provide against the insecurity of the age.

Merchandise.—As for merchandise on board the Bengali vessels it may be said that our poets described them as mainly intended for export to *Pātan* and *Singhal*. A system of barter was generally resorted to and fraud played by the Bengali merchants on foreigners of questionable civilization was a theme of our poets on which all of them wrote in the same strain. We find occasional mention of merchandise, but the prices are sometimes ludicrously exaggerated, as during the time when these Bengali works were written, sea-voyage was reduced to a vague tradition in which facts and fiction were hopelessly blended together. Still we give below two lists which no doubt contain some elements of truth. According to *Bangsidas* it was the Bengali merchants who introduced cocoanuts and betels in some foreign countries. The stories given seem, however, to be mere legend.

Items of Bengali merchandise.	A.	Articles of foreign countries.
in exchange of		
(1) Betel leaves	...	Ten emeralds for each leaf.
(2) Betel-nut	...	Ten gems.
(3) Lime	...	Quick-silver.
(4) Catechew	...	Gorachana (a bright yellow pigment).
(5) Cardamom	...	Pearl.
(6) Satabari Kámeswar (<i>Asparagus racemosus</i>)		Musk.
(7) Fruits	...	Golden bricks, bells, etc.
(8) Vegetable roots	...	Diamond.
(9) Pulses	...	Corals.
(10) Onions and garlies	...	Maces.
(11) Camphor	...	"Bakhar."
(12) Water weeds	...	Diamond.
(13) <i>Dolichos gladiatus</i> (Makhana)	...	Ruby.
(14) Goats and sheep	...	Golden docs.
(15) Radish	...	Ivory.
(16) Dry fish	...	Sandal wood.
(17) Sugarcane	...	Royal maces (Nabadanda —sign of royalty).
(18) Jute	...	Chowrie (chāmar).
(19) Wooden utensils	...	Golden and silver utensils.
(20) Wooden furniture	...	Golden furniture.
(21) Earthenwares	...	Bell-metal utensils.
(22) Oil and clarified butter	...	Quick-silver.
(23) Kumkum	...	Jarful of honey.
(24) Puppy	...	String of golden bells.
(25) Mosquito curtains, bed- dings, trousers, etc., all made of gunny cloth		Silken clothes and curtains, etc.

See Bangsidas, p. 344, for the above list.

B.

Items of Bengali merchandise.		Articles of foreign countries.
in exchange of		
(1) Deer	...	Horse.
(2) "Biranga "	...	Clove.
(3) Suntha	...	Tanka (a kind of wood apple, <i>Feronia Elephantum</i>).
(4) Ape	...	Elephant.
(5) Pigeon	...	Suā (A bristly Caterpillar).
(6) Fruits	...	"Jayfal."
(7) Bahara	...	Betel-nut.
(8) Jute	...	White chowrie (chāmar).
(9) Glass	...	Emerald.
(10) Sea salt	...	Rock salt.
(11) Dhuti (cloth)	...	Pots.
(12) Oystershell	...	Pearl.
(13) Harital	...	Diamond.
(14) "Joani."	...	"Jira."
(15) "Chua."	...	Sandal-paste.
(16) Sheep	...	Horse.

See Kabikankan Mukundaram's Chandi Kabya, p. 191—Dhanapati's exchange of merchandise in Ceylon—for the above list. The exchange of commodities here seems to be somewhat more reasonable than that to be found in Bangsidas.

The Bengali merchants carried on trade with Ceylon and Patan in Gujrat and visited the following notable ports :—

1. Puri.
2. Kalinga or Calingapatam.
3. Chilkachuli or Chicacole in Madras Presidency.
4. Banpur.
5. Setubandha Rameswar.

6. City of Lanka (in the site of Lanka Singhal or Ceylon).
7. Nilacca or Laccadives.
8. Patan.

One of the chief places outside India visited by the Bengali merchants was the Laccadives. Mention is made also of *Pralamba*, *Nakut*, *Aheelanka Chandrasalya* island and *Abartana* island which we cannot identify but which undoubtedly lay outside our country. Vivid description of the coasting voyage of the Bengali vessels from *Saptagrām* (an inland port of Bengal) to Patan in Gujrat by doubling the Cape of Comorin, is found in the *Manasāmangal* poem of Bangsidas. In *Chandikāvya* by Kabikankan Mukundaram we find accounts of mercantile adventurers of Bengal related in glowing terms. The lists of ports, both Indian and foreign, and the condition of sea-voyage tally in both these works.

In Bangsidās we meet with the following description of the voyage of Chand, the merchant. In spite of fancy and exaggeration a rough idea of the sea-routes and ports may be gleaned from it.

“The merchant started for South Patan. There were great celebrations and festivities at the city of Champaka. All the ships sailed one after another; at the head of the Vanguard was the admiral Gopal with forty-two small vessels. After leaving his own territory Chand passed the following places in succession—*Kāmārhati*, *Madhyanager*, *Pratupgarh*, *Gopālpur* and *Rāmnagar*. He then reached *Kālidah Sāgar* which he crossed leaving to the right *Gandharvapur* and to the left *Birnagar*. Then the merchant reached the mouths of the Ganges after passing *Kāmeswar*, *Mandarerthana*, *Pichalta* and *Rambishnupuri* one after another. At Gangasagar Chand performed worship and sacrificed goats. After leaving Champaknagar the ships were on the voyage for five months. The

merchant passed through many difficult places after having reached the sea. He passed Utkal and Kalinga on his right. Crabs, lobsters, leeches and crocodiles obstructed his passage through the malice of *Manasā Devi*. At last the merchant reached the golden *Lanka* surrounded by golden walls. Chand here saw the *Rakshasa* king and received his pass-port before proceeding further. Then he left *Lanka* on his right and passed the *Malaya* mountain near *Cape Comorin*. He passed also *Bijohnagar* (Ceylonese?) then ruled by King *Ahi*. The next important place which the merchant passed was *Parasuramtirtha*. Leaving this place the merchant reached the vast sea known as the "*Nilaccarbunk*" (lit. bend of sea near *Nilacca*—perhaps *Laccadives*). Reaching this sea the crew felt giddy at the vast expanse of water and deep sound of the waves, big as mountains. They almost lost their way but through the expert direction of Captain *Dulai* the vessels were steered rightly. It was by looking to the stars that *Dulai* could keep the right course. After much trouble the merchant *Chand* and his companions reached the city of *Pātan* then ruled by King *Chandraketu*. (See *Bangsidas*, pp. 318-338.)

On *Chand's* return from *Pātan* he passed the *Laccadives* sea, the *Vindya* ranges, *Lanka*, *Setubandha* *Rameswar*, the gulfs were infested with crocodiles, leeches, etc., and reached *Kalidahsagar* where he experienced heavy storm. (See *Bansidas*, pp. 396-399.) "

The above description leads us to think that *Pātan*, once a celebrated city in *Gujrat*, was much frequented by the *Bengali* merchants who reached the place by sea crossing the *Bay of Bengal*, part of *Indian ocean* and the *Arabian Sea*. The voyage was probably a coasting one and *Ceylon* which stood mid-way between *Bengal* and *Gujrat* by the sea route, was a favourite place of

commerce for the merchants. Pātan is not an inland city similar to that of Tamralipti or Tamluk which was once one of the greatest seaports of Bengal. *Pātan* though means a city such as *Lalitpātan* yet the frequent mention of this particular Pātan and the way leading to it makes us think that it is no other than the Pātan or Somnāth Pātan of Gujrat and not a fanciful creation of our poets.

As for the foreign countries and ports, it seems our merchants frequented the islands and ports of the Bay of Bengal and the Arabian Sea as have already been seen. We see the following in Bijoy Gupta's *Manasāmangal* :—

“ O, merchant, listen. In the north King Mukteswar reigns. It is very difficult to comprehend the ways of his people. They take the seeds of pepper for rice. The king of the east is known as Bidyā-Sanga. The greater the bulk of a person the more respect is shown to him. The people are all degraded and the social customs are in a most pitiable condition. Marriage laws are not at all strict as brothers often exchange their wives. Even a brother marries his sister in that land. The women there enjoy complete freedom and use coloured cloth specially to cover the breast. Caste system is not observed at all. In the west the people are barbarous. They bore their ears, show laxity of caste distinction and use ornaments on the neck. They do not give the girls in marriage unless they are sixteen and even then they put the married girl for some time in priest's house in lieu of his fee. A married girl even keeps the house of her husband's sister's husband. In case of any issue being born it shares the property on both sides.¹

¹ The peculiar customs regarding inheritance such as inheritance of nephews as found in *Bangśidas* are still current among the Nairs. Preserving dead bodies mentioned in the same work show the knowledge of Buddhistic conditions. See *Type set*, p. 234.

Now hear the condition of Patan or the South Patan. Its king is *Bikram Keshari*. The people of this land is very rich. They keep jars full of gems. In their land conch shells, pearls, etc., are abundantly found as sea waves fling them frequently on the shore in particular phases of the moon. Even the poor there owned oysters and pearls."

The above lines though full of grotesque fiction seem to contain some grains of truth in them. By the north the poet perhaps indicates the foreign countries to north-east of Bengal. From Chittagong onwards to China the people are fond of taking excessive quantity of pepper with their meal. By the east the poet perhaps means the Buddhist Burma and the adjoining countries where owing to the influence of Buddhism, caste system is ignored and marriage laws are less rigorous. The Burmese women are very fond of coloured garments. Freedom of women is also to be found in Burma. By the western country the poet possibly means Madras Presidency which lies to the south-west of Bengal. As for Pātan, it may be said that, it was a rich city as otherwise Bengali merchant vessels would not be described as visiting that place for nothing.

See also *Kabikankan*, pages 195-196, for voyages of the Bengalees:—

"After the performance of the proper ceremonies before sailing, the merchant Dhanapati passed the following places,—Bhowsingerghat, Matiarisafar, Chandigachha, Bolanpur, Purathan, Nabadwip, Mirzapur, Ambna, Santipur, Guptipara, Ula, Khishma, Mahespur, Fulia and Halisahar—all by the side of the Ganges. Then he reached the very celebrated inland port of Bengal known as *Saptagram* by the side of the Tribeni. Here the poet incidentally praised this port and gave it a superior place among the following ports and places (some

of which are Indian and some foreign) known to the poet. They are the ports of Kalinga, Trailanga, Anga, Banga, Carnut, Mahendra, Magadha, Maharashtra, Gujrat, Barendra, Vindhya, Pingal, Utkal, Dravir, Rarh, Bijohnagar, Maitra, Dwaraka, Kasi, Kankhal, Kekaya, Purabak, Anayuk, Godabari, Gaya, Sylhet, Kamrup, Koch, Hangar, Trihatta, Manika, Fatika, *Lanka*, *Pralamba*, *Nakutta*, Bagar, *Malay* (Indian), Kurukshetra, Bateswari, *Ahu Lanka*, Sibattatta, Mahanatta and Hastina, etc. According to the poet, the merchants of the above places visit Saptagram but the merchants of Saptagram do never visit those ports and places. (These prove the exaggerated notion of the poet about Saptagram).

At Saptagram the merchant took on board sufficient drinking water for his voyage; then he passed some other places of note by the river banks such as Nimaitirtha, Betarah, Bagan, Kalighat, Omulinga, Chhatrabhoga, Kalipar, Himai, Hetagarh, Sanketamadhaba, Madanmalla, Birkhana, Kalabati, and Dhuligram. On the way he experienced much storm on the river Magra. It took the merchant twenty days to reach the canal of *Angarpur*. Then his vessels entered the sea adjoining the country of the Dravidas. The first place of note was Puri celebrated for its temple of Jagannath. Then the merchant visited Chilkachuli, or Chicacole. Next ports of note were Balighata and Banpur which were left very soon. Then they reached the land of the Firinghees (Portuguese). They passed this place stealthily at night as they were afraid of these people who were very strong for their fleet of warships which were known as Harmada (Portuguese Armada, the Portuguese being very strong in ships in these parts). Dhanapati then passed some seas infested with crabs, snakes and crocodiles, etc., like Chand. After much difficulty he reached *Lanka*. Before reaching Lanka Dhanapati's vessels touched

Setubandha-Rameswar and crossed *Kalidaha* or Black Sea."

It is peculiar that *Kalidaha* which Bangsidas mentions to be near Bengal, Kabikankan places near Ceylon. It may be that any expanse of blue sea was taken by them to be *Kalidaha*. As for the mention of the Harmadas it may safely be said that they are matters of history. The Portuguese pirate vessels were for some time the curse of the eastern sea.

In the voyage of Srimanta, son of Dhanapati, we come across two islands namely, Chandrasalya and Abar-tana, both lying on the way to Ceylon. We cannot locate these two islands as we cannot locate Banpur "en route" to Chand's voyage for obvious reasons. Though there is evidently much exaggeration about the size of the ships, it is quite probable that the ships of the Bengali merchants were often of enormous size, for enormity of size was the fashion of the time. The Bengali poets had some traditions of the past, to which they added much that they derived from their imaginations.



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From the records, I have come across in course of my researches in the field of old Bengali literature, it shows that ship-building reached a high degree of perfection both in regard to workmanship and efficiency in ancient Bengal when the sea-going ships were actively engaged in promoting the prosperity of the province by conducting commercial intercourse with various countries both within and outside India.

The wood required for the construction of ships were teak, *gāmbhāri*, *tamāl*, *peal*, jackwood, etc. But it seems, the wood of the fabled tree *Manapaban* was, however, best for the purpose. The name itself is poetic, signifying the utmost speed that a vessel would acquire if built with such wood. It was, however, foreign to Bengal and very difficult to be secured as we learn from an elaborate description in Bangsidas (p. 283).

In building a vessel the first work to be done was a ceremony known as 'Dārābindhā' or thrusting of a gold nail (Sonarjal) to the keel (Dārā) with the help of a silver hammer (hātur). It was done by the owner himself. After this ceremony, the actual work of construction was to begin. First a measurement of the vessel was to be taken. Then the keel (Dārā) was to be carefully

constructed with which strong pieces of timber were joined with the help of iron-nails. Next the 'galui' (prow) was to be built. This finished the hold of a vessel. The deck, the *pātātan* (pieces of timber joined to the keel) and the shed were also made. After these, the construction of helm and rudders, and decoration-work made the building of a ship complete. It may be noted that the prow took the appearance of a peacock or a Cuka bird or some other fancy shape specified in the works on art and the ships were accordingly known as "*Maur-pankhi*," "*Cukapankhi*," etc. Mention of seven types of prows representing the shapes of a lion, a buffalo, a serpent, an elephant, a tiger and a bird, is found in old Sanskrit literature, such as *Juktikalpataru*; see also *Viswakosh*, Vol. X, p. 461.

A vivid description of the construction of a vessel is found in *Bangsidas*, p. 286. An idea of this is given below :—

The Lord of Champaka (the merchant Chānd) constructed some vessels for which purpose he himself performed the ceremony of gold nailing (*Sonār-jal* or *jalai*). The length of the vessel was fixed at a thousand yards (more than half a mile, evidently exaggerated). From the keel to the central deck the height was six cubits and a half (thirteen *tāl*) to stabilize the equilibrium of a ship. The bamboo-poles for plying the vessels were also measured with thread. More serious work, however, commenced with the construction of the hold of a ship. The wood ordinarily chosen for the purpose was known as "*Manapaban*," noted for imparting swiftness of the wind to the ship on slightest wish. Very strong pieces of this timber were joined together with the help of iron-nails. Joints were covered by soldering to avoid saline water corroding the iron-nails. In this way the construction of the hold was completed. When it was

finished the metallic sheets (*pith-pāt*) were fitted and the mat doors (*jhāp*) fixed up. Then '*Māthākāstha*,' or, '*galui*' (prow) was made, decorated with golden and silver flowers. The principal cabin was built, after the deck composed of wooden planks had been fitted up (*pātātan*). This chief cabin (*Raighar*) was beautifully decorated with rows of artificial flower garlands. On the vessel the mast (*Malum wood*) was duly fitted. The helm (*pātwāl*) and its auxiliary piece of timber (*jhokābāri*) were also not forgotten. When these had been finished, a nicely ornamented shed was built on the ship. It had rows of '*chūmar*' (chowri) and festoons of various types which made the vessel look pretty. Finally, the eyes of the figure on the prow of the ship were bedecked with jewels resembling the moon. This completed the building of the ship.

A similar description of ships as found in *Kabikankan* is given below (pp. 221-222):—

"Seven '*dingās*,' or, vessels were built by Biswakarmā and his son Dārubrahmā with the assistance of Hanumān. The mighty hero Hanumān began to saw the wood of various denominations such as '*Sāl*,' '*tāl*,' '*Kāthāl*,' '*peal*,' '*gāmbhāri*,' and, '*tamāl*.' The architect Dārubrahmā in the meantime made the iron nails. They made beautiful vessels each of which were hundred yards in length and twenty yards in breadth. The prow of each resembled the head of a *Makara* fish. It was made of ivory and the eye-balls were made of precious gems. First, the ship '*Madhukara*' was constructed. In its central part there was the '*raighar*' containing *rājāsan* or, the principal cabin for the merchant. A nook was reserved for the helmsman and the back part as the strong room for keeping treasures. There was also the mast on the vessel. Of the jack and the teakwoods *danda-kerwal* or the oars were made and a

helm was fitted to the prow of each vessel. The seven vessels were named :—

- (i) Madhukarā (the Bee)—the flagship.
- (ii) Guarekhi (its prow resembled the head of a Lion).
- (iii) Ranajayā (the Victory).
- (iv) Ranavima (the Terrible in war).
- (v) Mahakāya (the Titanic).
- (vi) Sarvadhara (the All-container).
- (vii) Nātsālā (the Amusement-hall).

The following were the principal parts of a vessel :—

- (i) Dārā (helm) or *patwāl*.¹
- (ii) Mālumkāstha (the mast).
- (iii) Talā (hold).
- (iv) Māthākāstha (prow).
- (v) Chhaighar (shed).
- (vi) Pātātan (deck).
- (vii) Dandakerwāl (Oar).
- (viii) Bangsakerwāl or Dhavaji (bamboo-pole).
- (ix) Fāns (chord).
- (x) Nangar (anchor).
- (xi) Pāl (sail).
- (xii) Dārā (Keel).

The above names are still used to convey the meaning they did in ancient Bengal. It would be interesting for the purpose of comparative study to find out if some of these technical words were analogous to those used in other parts of India in the literature of ship-building.

In the description, given above, we find elaborate details of the different parts of a ship built in those days. Exaggerated descriptions are, however, apparent, in the writings of Bijoy Gupta specially, who flourished

¹ Dara in the present dialect of the countryside means an oar, but in our old books it has oftentimes the meaning given above.

in the fifteenth century, when ship-building as an art was practically abandoned in Bengal. But though there is much of legend in the stories, the old traditions were not altogether lost sight of. Ships of considerable tonnage for commercial purposes were surely still being constructed. See Kabikankan, p. 220. "If hundred carpenters work for a whole year, only one vessel is constructed"; see Bangsidas, p. 285, "sixteen hundred carpenters cut the branches of the '*Manpaban*' tree and piled them up in rows"; see also Bangsidas, p. 282, "By the command of the king, the chief engineer Giribar and the admiral Gopal started with sixteen hundred carpenters." The descriptions of voyages often go to show that ships of titanic dimensions used to be constructed in Bengal even if sufficient allowances are made for poetic exaggerations. In Bijoy Gupta we find the following:—

"First was launched the *Madhukara*. On it the millionaire Chand took his residence. It was followed by the ship called '*Biju-siju*.' This ship was so big that it broke the crooked projections of the banks levelling them on its way owing to its very big dimensions. Then sailed the *Guarekhi*. It was so high that the city of Lanka, situated a long way off, was visible from its deck. After it, sailed, "*Bharar-Patua*." All the Tamil people were on board this ship. It was followed by "*Sankha-chur*" (the Shell-crowned). It was so gigantic a ship that its sides seemed to touch two opposite shores of big rivers and its bottom the ground under water. Next started "*Ajayshelpet*" (the Invincible steel-bottomed). There was arrangement for a big fair on it. Then could be seen the ship '*Udaytara*' (the Morning star); its length was so extraordinary that when half the portion suffered from rain, the other half enjoyed sunshine. Then sailed '*Tiathuti*' (the Parrot-beaked). It was full of merchandise, such as jute

and coarse blankets, etc. Then followed *Dhabal* (the white). It was so big that it moved slowly and often stopped owing to its great bulk when it was to be set in motion again by sacrificing a hundred goats to propitiate the sea-god. Then sailed '*Kedar*' (the great God Siva). Before reaching the shore it had to be worshipped with incense and *Panchapradip* as is done in a temple when performing the evening service. Then came "*Pakshiraj*" (the Prince of birds). Many fruit trees of considerable size were there for use of the people on board the ship. Then was launched the ship "*Bhimaksha*" (the fierce-eyed). Upon it was taken conch shells numbering fourteen lacs. It was followed by the vessel *Sankhatali* (the treasure of shells). Its principal parts were made of sandal wood. Behind it sailed the vessel '*Ajlā-kajlā*.' It used to devour a hundred goats at every turn of the river (meaning that its size was so big that at every turn its motion had to be ensured by a sacrifice of hundred goats). Thus one by one the ships sailed with the merchant for *Gangāsagar*."

The following description taken from Bangsidas (p. 288) may also be noted :—

"The first vessel which Chand launched on water was '*Madhukara*.' Its deck was filled with earth, so that it took the appearance of land upon which a small town with markets were established. The foredeck was reserved for worship. A tank of fresh water was not wanting in it with aquatic plants on its surface to keep it cool and with fishes of various descriptions. A vegetable and a flower garden completed the outfit of this wonderful ship. The merchant Chand ascertained the cost of this ship to be fourteen lacs of rupees as may be gathered from what he said to his treasurer Govinda. He furthermore said that the merchandise on board this vessel was worth the same amount.

See also Bangsidas, p. 319 :—

First started *Sankhachur* followed by "*Chhatighati*" (the ship of wares) which was filled with earthen wares. Then "*Kajal-rekhi*" (Lined with collyrium), "*Durgabar*" (the Boon of Durga), and "*Manikyamerua*" (the Diamond-crowned) sailed one after another. The last was so big that it had to be driven by sixteen hundred oarsmen. Then sailed '*Rajballav*' (the favourite of the king), '*Hansakhal*' (the Royal Duck), and '*Sagarfena*' (the sea-foam) one behind the other. The last one was full of tamil soldiers. Behind these ships came '*Udaygiri*' (the mountain of the rising sun) followed by "*Lakshipashū*" (the abode of the harvest goddess). In the latter ship the priest Subhai took up his residence with all the requisites for worshipping *Hara-Gauri*. The next two vessels were "*Udaylara*" (the Morning Star) and "*Gangaprasad*" (the Favour of the Ganges) respectively. The last one of the fourteen ships was the flagship termed "*Madhukara*" (the Bee) which was the best of the lot. In it the merchant Chand, the lord of the fleet, established his quarters with his five advisers. During the voyage the crew sang *sari* songs (a kind of chorus) all the while."

Another description is given below from Kabikankan, p. 191 :—

"First was recovered from water the ship "*Madhukara*." Its drawing-room was made of solid gold. Then came the turn of *Durgābar*. It was full of *Gābar* or sailors. Then came to sight the ship "*Guarekhi*." Its mast (*Malumwood*) might be seen from a distance of six miles. Another ship which rose up was named *Sankhachur*. It was so big that it had a breadth of eighty yards. Another ship named *Chandrapal* was also recovered from water. Its breadth was so great that when sailing its sides almost touched the banks of the river. The

seventh and the last vessel was named *Chhatimati* which had a cargo of rice."

In spite of the exaggerated descriptions of the poets that we ordinarily come across about big vessels it must not be construed that smaller crafts were lost sight of by them. We find in Bangsidas, p. 320, the following, "The admiral Gopal who sailed first had with him forty-two small boats (*hat nāo*). The construction of the river boats and sea-going ships are now precisely of the same type as we find it in the old literature, and the nomenclature adopted in the past was on the whole the same as we use it now. It seems that the sea-going vessels and the rivercrafts were built on the same principle. Even the other day a coasting vessel named *Aminakhatun* and its sister vessels of considerable tonnage were built by a merchant of Chittagong with the help of local carpenters and mechanics and the method of building they adopted, appears to be the same as it was done in the past. The strong build and the high speed of these sailing ships were perhaps not inferior to those of similar ships used in England in the days of Nelson. The coincidence of keeping a flagship in the mercantile marine as we find to-day in the navy of the civilised nations is curious indeed. The numbers of ships, seven and fourteen, which the merchants of old generally adopted in completing a fleet were perhaps due to the notion that these numbers were auspicious. For a fuller information about the old Bengali vessels reference may be made to the *Folk-Literature of Bengal*, pp. 65, 75 and 249.

Among the crew the following may be noted :—

- (1) Gābar (sailors) who were of two classes.
 - (a) Mānjhi or Oarsmen, (b) Dāri or Karnadhār (helmsmen).
- (2) Sutradhar (carpenter).

- (3) Karmakār (blacksmith).
- (4) Pāik (foot soldiers).
- (5) Dubāri (Diver).
- (6) Mirbahar (admiral).
- (7) Kārikar (craftsman of various description).
- (8) Kārāri (helmsman and captain).

Gābar.—A sailor. The caste from which boatmen were generally recruited is still known in Bengal as *Gābar*. They were exceptionally sturdy as the term "*Gaithyār-gābar*," applied to them, signifies great physical strength. The sailors used to sing a chorus called *sāri* when plying their oars. See History of Bengali Language and Literature, p. 396. See also *Satyanarayana Punthi* edited by Abdul Karim and *Manasa Mangal* poems for *Gābar*. The sailors were mainly East Bengal people. See Kabikankan, pp. 198 and 207-208. For plying vessels the *Gābars* used 'Danda' (helm), *Danda kerwāls* (oars), *Bangsakerwāls* (bamboo-poles) and *Fāns* (chords). See p. 195, Kabikankan. See also Kabikankan, pp. 227, 228, 207, 229, 234, 236, 194 for *Gabar*, *Kerwals*, etc.

Sutradhar (carpenter).—Carpenters were needed for repairs and joining of parts; they supplied the necessary crew corresponding to an Engineering staff maintained on board a modern ship.

Kormakār (Blacksmith).—Blacksmiths were engaged in building a ship and as their services were considered indispensable, they were taken on board the ships.

Pāik (foot-soldiers).—They were taken on board the vessels engaged in mercantile pursuits due perhaps to the insecurity of the age. They were engaged to protect the valuable merchandise against any possible attack of pirates or hostile foreigners. The soldiers engaged belonged to different countries. See Bangsidas, p. 329. Mention is found of the Telegu soldiers employed by

the Bengalis in the *Manasā-mangal* and the *Dharma-mangal* poems.

Dubāri, or divers.—They accompanied sea-going merchant vessels to ascertain if there was anything wrong in that part of a vessel which remained under the water. See *Bangsidas*, p. 329.

Mirbahar (Admiral).—It is an abbreviation of the Arabic term *Amir-al-Bahar* meaning an admiral of a fleet. The admirals would accompany not only warships but also armed merchantmen as appears from the description of Chand's voyage of trade. In *Bangsidas* we find the admiral Gopal accompanying the expedition of carpenters in quest of *Manapaban* wood perhaps to protect them from any possible aggression. This precaution was necessary to provide against the insecurity of the age.

Merchandise.—As for merchandise on board the Bengali vessels it may be said that our poets described them as mainly intended for export to *Pātan* and *Singhal*. A system of barter was generally resorted to and fraud played by the Bengali merchants on foreigners of questionable civilization was a theme of our poets on which all of them wrote in the same strain. We find occasional mention of merchandise, but the prices are sometimes ludicrously exaggerated, as during the time when these Bengali works were written, sea-voyage was reduced to a vague tradition in which facts and fiction were hopelessly blended together. Still we give below two lists which no doubt contain some elements of truth. According to *Bangsidas* it was the Bengali merchants who introduced cocoanuts and betels in some foreign countries. The stories given seem, however, to be mere legend.

Items of Bengali merchandise.	A.	Articles of foreign countries.
in exchange of		
(1) Betel leaves	...	Ten emeralds for each leaf.
(2) Betel-nut	...	Ten gems.
(3) Lime	...	Quick-silver.
(4) Catechew	...	Gorachana (a bright yellow pigment).
(5) Cardamom	...	Pearl.
(6) Satabari Kámeswar (<i>Asparagus racemosus</i>)		Musk.
(7) Fruits	...	Golden bricks, bells, etc.
(8) Vegetable roots	...	Diamond.
(9) Pulses	...	Corals.
(10) Onions and garlies	...	Maces.
(11) Camphor	...	"Bakhar."
(12) Water weeds	...	Diamond.
(13) <i>Dolichos gladiatus</i> (Makhana)	...	Ruby.
(14) Goats and sheep	...	Golden does.
(15) Radish	...	Ivory.
(16) Dry fish	...	Sandal wood.
(17) Sugarcane	...	Royal maces (Nabadanda —sign of royalty).
(18) Jute	...	Chowrie (chāmar).
(19) Wooden utensils	...	Golden and silver utensils.
(20) Wooden furniture	...	Golden furniture.
(21) Earthenwares	...	Bell-metal utensils.
(22) Oil and clarified butter	...	Quick-silver.
(23) Kumkum	...	Jarful of honey.
(24) Puppy	...	String of golden bells.
(25) Mosquito curtains, bed- dings, trousers, etc., all made of gunny cloth		Silken clothes and curtains, etc.

See Bangsidas, p. 344, for the above list.

B.

Items of Bengali merchandise.		Articles of foreign countries.
	in exchange of	
(1) Deer	...	Horse.
(2) "Biranga "	...	Clove.
(3) Suntha	...	Tanka (a kind of wood apple, <i>Feronia Elephantum</i>).
(4) Ape	...	Elephant.
(5) Pigeon	...	Suā (A bristly Caterpillar).
(6) Fruits	...	"Jayfal."
(7) Bahara	...	Betel-nut.
(8) Jute	...	White chowrie (chāmar).
(9) Glass	...	Emerald.
(10) Sea salt	...	Rock salt.
(11) Dhuti (cloth)	...	Pots.
(12) Oystershell	...	Pearl.
(13) Harital	...	Diamond.
(14) "Joani."	...	"Jira."
(15) "Chua."	...	Sandal-paste.
(16) Sheep	...	Horse.

See Kabikankan Mukundaram's Chandi Kabya, p. 191—Dhanapati's exchange of merchandise in Ceylon—for the above list. The exchange of commodities here seems to be somewhat more reasonable than that to be found in Bangsidas.

The Bengali merchants carried on trade with Ceylon and Patan in Gujrat and visited the following notable ports :—

1. Puri.
2. Kalinga or Calingapatam.
3. Chilkachuli or Chicacole in Madras Presidency.
4. Banpur.
5. Setubandha Rameswar.

6. City of Lanka (in the site of Lanka Singhal or Ceylon).
7. Nilacca or Laccadives.
8. Patan.

One of the chief places outside India visited by the Bengali merchants was the Laccadives. Mention is made also of *Pralamba*, *Nakut*, *Aheelanka Chandrasalya* island and *Abartana* island which we cannot identify but which undoubtedly lay outside our country. Vivid description of the coasting voyage of the Bengali vessels from *Saptagrām* (an inland port of Bengal) to Patan in Gujrat by doubling the Cape of Comorin, is found in the *Manasāmangal* poem of Bangsidas. In *Chandikāvya* by Kabikankan Mukundaram we find accounts of mercantile adventurers of Bengal related in glowing terms. The lists of ports, both Indian and foreign, and the condition of sea-voyage tally in both these works.

In Bangsidās we meet with the following description of the voyage of Chand, the merchant. In spite of fancy and exaggeration a rough idea of the sea-routes and ports may be gleaned from it.

“The merchant started for South Patan. There were great celebrations and festivities at the city of Champaka. All the ships sailed one after another; at the head of the Vanguard was the admiral Gopal with forty-two small vessels. After leaving his own territory Chand passed the following places in succession—*Kāmārhati*, *Madhyānagar*, *Pratupgarh*, *Gopālpur* and *Rāmnagar*. He then reached *Kālidah Sāgar* which he crossed leaving to the right *Gandharvapur* and to the left *Birnagar*. Then the merchant reached the mouths of the Ganges after passing *Kāmeswar*, *Mandarerthana*, *Pichalta* and *Rambishnupuri* one after another. At Gangasagar Chand performed worship and sacrificed goats. After leaving Champaknagar the ships were on the voyage for five months. The

merchant passed through many difficult places after having reached the sea. He passed Utkal and Kalinga on his right. Crabs, lobsters, leeches and crocodiles obstructed his passage through the malice of *Manasā Devi*. At last the merchant reached the golden *Lanka* surrounded by golden walls. Chand here saw the *Rakshasa* king and received his pass-port before proceeding further. Then he left *Lanka* on his right and passed the *Malaya* mountain near *Cape Comorin*. He passed also *Bijohnagar* (Ceylonese?) then ruled by King *Ahi*. The next important place which the merchant passed was *Parasuramtirtha*. Leaving this place the merchant reached the vast sea known as the "*Nilaccarbunk*" (lit. bend of sea near *Nilacca*—perhaps *Laccadives*). Reaching this sea the crew felt giddy at the vast expanse of water and deep sound of the waves, big as mountains. They almost lost their way but through the expert direction of Captain *Dulai* the vessels were steered rightly. It was by looking to the stars that *Dulai* could keep the right course. After much trouble the merchant *Chand* and his companions reached the city of *Pātan* then ruled by King *Chandraketu*. (See *Bangsidas*, pp. 318-338.)

On *Chand's* return from *Pātan* he passed the *Laccadives* sea, the *Vindya* ranges, *Lanka*, *Setubandha* *Rameswar*, the gulfs were infested with crocodiles, leeches, etc., and reached *Kalidahsagar* where he experienced heavy storm. (See *Bangsidas*, pp. 396-399.) "

The above description leads us to think that *Pātan*, once a celebrated city in *Gujrat*, was much frequented by the *Bengali* merchants who reached the place by sea crossing the *Bay of Bengal*, part of *Indian ocean* and the *Arabian Sea*. The voyage was probably a coasting one and *Ceylon* which stood mid-way between *Bengal* and *Gujrat* by the sea route, was a favourite place of

commerce for the merchants. Pātan is not an inland city similar to that of Tamralipti or Tamruk which was once one of the greatest seaports of Bengal. *Pātan* though means a city such as *Lalitpātan* yet the frequent mention of this particular Pātan and the way leading to it makes us think that it is no other than the Pātan or Somnāth Pātan of Gujrat and not a fanciful creation of our poets.

As for the foreign countries and ports, it seems our merchants frequented the islands and ports of the Bay of Bengal and the Arabian Sea as have already been seen. We see the following in Bijoy Gupta's *Manasāmangal* :—

“O, merchant, listen. In the north King Mukteswar reigns. It is very difficult to comprehend the ways of his people. They take the seeds of pepper for rice. The king of the east is known as Bidyā-Sanga. The greater the bulk of a person the more respect is shown to him. The people are all degraded and the social customs are in a most pitiable condition. Marriage laws are not at all strict as brothers often exchange their wives. Even a brother marries his sister in that land. The women there enjoy complete freedom and use coloured cloth specially to cover the breast. Caste system is not observed at all. In the west the people are barbarous. They bore their ears, show laxity of caste distinction and use ornaments on the neck. They do not give the girls in marriage unless they are sixteen and even then they put the married girl for some time in priest's house in lieu of his fee. A married girl even keeps the house of her husband's sister's husband. In case of any issue being born it shares the property on both sides.¹

¹ The peculiar customs regarding inheritance such as inheritance of nephews as found in *Bangsidas* are still current among the Nairs. Preserving dead bodies mentioned in the same work show the knowledge of Buddhistic conditions. See Type set, p. 234.

Now hear the condition of Patan or the South Patan. Its king is *Bikrom Keshari*. The people of this land is very rich. They keep jars full of gems. In their land conch shells, pearls, etc., are abundantly found as sea waves fling them frequently on the shore in particular phases of the moon. Even the poor there owned oysters and pearls."

The above lines though full of grotesque fiction, seem to contain some grains of truth in them. By the north the poet perhaps indicates the foreign countries to north-east of Bengal. From Chittagong onwards to China the people are fond of taking excessive quantity of pepper with their meal. By the east the poet perhaps means the Buddhist Burma and the adjoining countries where owing to the influence of Buddhism, caste system is ignored and marriage laws are less rigorous. The Burmese women are very fond of coloured garments. Freedom of women is also to be found in Burma. By the western country the poet possibly means Madras Presidency which lies to the south-west of Bengal. As for Pātan, it may be said that, it was a rich city as otherwise Bengali merchant vessels would not be described as visiting that place for nothing.

See also *Kabikankan*, pages 195-196, for voyages of the Bengalees:—

"After the performance of the proper ceremonies before sailing, the merchant Dhanapati passed the following places,—Bhowsingerghat, Matiarisafar, Chandi-gachha, Bolanpur, Purathan, Nabadwip, Mirzapur, Ambna, Santipur, Guptipara, Ula, Khishma, Mahespur, Fulia and Halisahar—all by the side of the Ganges. Then he reached the very celebrated inland port of Bengal known as *Saptagram* by the side of the Tribeni. Here the poet incidentally praised this port and gave it a superior place among the following ports and places (some

of which are Indian and some foreign) known to the poet. They are the ports of Kalinga, Trailanga, Anga, Banga, Carnut, Mahendra, Magadha, Maharastra, Gujrat, Barendra, Vindhya, Pingal, Utkal, Dravir, Rarh, Bijohnagar, Maitra, Dwaraka, Kasi, Kankhal, Kekaya, Purabak, Anayuk, Godabari, Gaya, Sylhet, Kamrup, Koch, Hangar, Trihatta, Manika, Fatika, *Lanka*, *Pralamba*, *Nakutta*, Bagar, *Malay* (Indian), Kurukshetra, Bateswari, *Ahu Lanka*, Sibatatta, Mahanatta and Hastina, etc. According to the poet, the merchants of the above places visit Saptagram but the merchants of Saptagram do never visit those ports and places. (These prove the exaggerated notion of the poet about Saptagram).

At Saptagram the merchant took on board sufficient drinking water for his voyage; then he passed some other places of note by the river banks such as Nimaitirtha, Betarah, Bagan, Kalighat, Omulinga, Chhatrabhoga, Kalipar, Himai, Hetagarh, Sauketamadhava, Madanmalla, Birkhana, Kalahati, and Dhuligram. On the way he experienced much storm on the river Magra. It took the merchant twenty days to reach the canal of *Angarpur*. Then his vessels entered the sea adjoining the country of the Dravidas. The first place of note was Puri celebrated for its temple of Jagannath. Then the merchant visited Chilkachuli, or Chicacole. Next ports of note were Balighata and Banpur which were left very soon. Then they reached the land of the Firinghees (Portuguese). They passed this place stealthily at night as they were afraid of these people who were very strong for their fleet of warships which were known as Harmada (Portuguese Armada, the Portuguese being very strong in ships in these parts). Dhanapati then passed some seas infested with crabs, snakes and crocodiles, etc., like Chand. After much difficulty he reached *Lanka*. Before reaching Lanka Dhanapati's vessels touched

Setubandha-Rameswar and crossed *Kalidaha* or Black Sea."

It is peculiar that *Kalidaha* which Bangsidas mentions to be near Bengal, Kabikankan places near Ceylon. It may be that any expanse of blue sea was taken by them to be *Kalidaha*. As for the mention of the Harmadas it may safely be said that they are matters of history. The Portuguese pirate vessels were for some time the curse of the eastern sea.

In the voyage of Srimanta, son of Dhanapati, we come across two islands namely, Chandrasalya and Abar-tana, both lying on the way to Ceylon. We cannot locate these two islands as we cannot locate Banpur "en route" to Chand's voyage for obvious reasons. Though there is evidently much exaggeration about the size of the ships, it is quite probable that the ships of the Bengali merchants were often of enormous size, for enormity of size was the fashion of the time. The Bengali poets had some traditions of the past, to which they added much that they derived from their imaginations.



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From the records, I have come across in course of my researches in the field of old Bengali literature, it shows that ship-building reached a high degree of perfection both in regard to workmanship and efficiency in ancient Bengal when the sea-going ships were actively engaged in promoting the prosperity of the province by conducting commercial intercourse with various countries both within and outside India.

The wood required for the construction of ships were teak, *gāmbhāri*, *tamāl*, *peal*, jackwood, etc. But it seems, the wood of the fabled tree *Manapaban* was, however, best for the purpose. The name itself is poetic, signifying the utmost speed that a vessel would acquire if built with such wood. It was, however, foreign to Bengal and very difficult to be secured as we learn from an elaborate description in Bangsidas (p. 283).

In building a vessel the first work to be done was a ceremony known as 'Dārābindhā' or thrusting of a gold nail (Sonarjal) to the keel (Dārā) with the help of a silver hammer (hātur). It was done by the owner himself. After this ceremony, the actual work of construction was to begin. First a measurement of the vessel was to be taken. Then the keel (Dārā) was to be carefully

constructed with which strong pieces of timber were joined with the help of iron-nails. Next the 'galui' (prow) was to be built. This finished the hold of a vessel. The deck, the *pātātan* (pieces of timber joined to the keel) and the shed were also made. After these, the construction of helm and rudders, and decoration-work made the building of a ship complete. It may be noted that the prow took the appearance of a peacock or a Cuka bird or some other fancy shape specified in the works on art and the ships were accordingly known as "*Maur-pankhi*," "*Cukapankhi*," etc. Mention of seven types of prows representing the shapes of a lion, a buffalo, a serpent, an elephant, a tiger and a bird, is found in old Sanskrit literature, such as *Juktikalpataru*; see also *Viswakosh*, Vol. X, p. 461.

A vivid description of the construction of a vessel is found in *Bangsidas*, p. 286. An idea of this is given below :—

The Lord of Champaka (the merchant Chānd) constructed some vessels for which purpose he himself performed the ceremony of gold nailing (*Sonār-jal* or *jalai*). The length of the vessel was fixed at a thousand yards (more than half a mile, evidently exaggerated). From the keel to the central deck the height was six cubits and a half (thirteen *tāl*) to stabilize the equilibrium of a ship. The bamboo-poles for plying the vessels were also measured with thread. More serious work, however, commenced with the construction of the hold of a ship. The wood ordinarily chosen for the purpose was known as "*Manapaban*," noted for imparting swiftness of the wind to the ship on slightest wish. Very strong pieces of this timber were joined together with the help of iron-nails. Joints were covered by soldering to avoid saline water corroding the iron-nails. In this way the construction of the hold was completed. When it was

finished the metallic sheets (pith-pāt) were fitted and the mat doors (jhāp) fixed up. Then ‘*Māthākāstha*,’ or, ‘*galui*’ (prow) was made, decorated with golden and silver flowers. The principal cabin was built, after the deck composed of wooden planks had been fitted up (*pātātan*). This chief cabin (*Raighar*) was beautifully decorated with rows of artificial flower garlands. On the vessel the mast (*Malum wood*) was duly fitted. The helm (*pātwāl*) and its auxiliary piece of timber (*jhokābāri*) were also not forgotten. When these had been finished, a nicely ornamented shed was built on the ship. It had rows of ‘*chāmar*’ (chowri) and festoons of various types which made the vessel look pretty. Finally, the eyes of the figure on the prow of the ship were bedecked with jewels resembling the moon. This completed the building of the ship.

A similar description of ships as found in *Kabikankan* is given below (pp. 221-222):—

“Seven ‘*dingās*,’ or, vessels were built by Biswakarmā and his son Dārubrahmā with the assistance of Hanumān. The mighty hero Hanumān began to saw the wood of various denominations such as ‘*Sāl*,’ ‘*tāl*,’ ‘*Kāthāl*,’ ‘*peal*,’ ‘*gāmbhāri*,’ and, ‘*tamāl*.’ The architect Dārubrahmā in the meantime made the iron nails. They made beautiful vessels each of which were hundred yards in length and twenty yards in breadth. The prow of each resembled the head of a *Makara* fish. It was made of ivory and the eye-balls were made of precious gems. First, the ship ‘*Madhukara*’ was constructed. In its central part there was the ‘*raighar*’ containing *rājāsan* or, the principal cabin for the merchant. A nook was reserved for the helmsman and the back part as the strong room for keeping treasures. There was also the mast on the vessel. Of the jack and the teakwoods *danda-kerwal* or the oars were made and a

helm was fitted to the prow of each vessel. The seven vessels were named :—

- (i) Madhukarā (the Bee)—the flagship.
- (ii) Guarekhi (its prow resembled the head of a Lion).
- (iii) Ranajayā (the Victory).
- (iv) Ranavima (the Terrible in war).
- (v) Mahakāya (the Titanic).
- (vi) Sarvadhara (the All-container).
- (vii) Nātsālā (the Amusement-hall).

The following were the principal parts of a vessel :—

- (i) Dārā (helm) or *patiwāl*.¹
- (ii) Mālumkāstha (the mast).
- (iii) Talā (hold).
- (iv) Māthākāstha (prow).
- (v) Chhaighar (shed).
- (vi) Pātātan (deck).
- (vii) Dandakerwāl (Oar).
- (viii) Bangsakerwāl or Dhavaji (bamboo-pole).
- (ix) Fāns (chord).
- (x) Nangar (anchor).
- (xi) Pāl (sail).
- (xii) Dārā (Keel).

The above names are still used to convey the meaning they did in ancient Bengal. It would be interesting for the purpose of comparative study to find out if some of these technical words were analogous to those used in other parts of India in the literature of ship-building.

In the description, given above, we find elaborate details of the different parts of a ship built in those days. Exaggerated descriptions are, however, apparent, in the writings of Bijoy Gupta specially, who flourished

¹ Dara in the present dialect of the countryside means an oar, but in our old books it has oftentimes the meaning given above.

in the fifteenth century, when ship-building as an art was practically abandoned in Bengal. But though there is much of legend in the stories, the old traditions were not altogether lost sight of. Ships of considerable tonnage for commercial purposes were surely still being constructed. See Kabikankan, p. 220. "If hundred carpenters work for a whole year, only one vessel is constructed"; see Bangsidas, p. 285, "sixteen hundred carpenters cut the branches of the '*Manpaban*' tree and piled them up in rows"; see also Bangsidas, p. 282, "By the command of the king, the chief engineer Giribar and the admiral Gopal started with sixteen hundred carpenters." The descriptions of voyages often go to show that ships of titanic dimensions used to be constructed in Bengal even if sufficient allowances are made for poetic exaggerations. In Bijoy Gupta we find the following:—

"First was launched the *Madhukara*. On it the millionaire Chand took his residence. It was followed by the ship called '*Biju-siju*.' This ship was so big that it broke the crooked projections of the banks levelling them on its way owing to its very big dimensions. Then sailed the *Guarekhi*. It was so high that the city of Lanka, situated a long way off, was visible from its deck. After it, sailed, "*Bharar-Patua*." All the Tamil people were on board this ship. It was followed by "*Sankha-chur*" (the Shell-crowned). It was so gigantic a ship that its sides seemed to touch two opposite shores of big rivers and its bottom the ground under water. Next started "*Ajayshelpet*" (the Invincible steel-bottomed). There was arrangement for a big fair on it. Then could be seen the ship '*Udaylara*' (the Morning star); its length was so extraordinary that when half the portion suffered from rain, the other half enjoyed sunshine. Then sailed '*Tiathuti*' (the Parrot-beaked). It was full of merchandise, such as jute

and coarse blankets, etc. Then followed *Dhabal* (the white). It was so big that it moved slowly and often stopped owing to its great bulk when it was to be set in motion again by sacrificing a hundred goats to propitiate the sea-god. Then sailed '*Kedar*' (the great God Siva). Before reaching the shore it had to be worshipped with incense and *Panchapradip* as is done in a temple when performing the evening service. Then came "*Pakshiraj*" (the Prince of birds). Many fruit trees of considerable size were there for use of the people on board the ship. Then was launched the ship "*Bhimaksha*" (the fierce-eyed). Upon it was taken conch shells numbering fourteen lacs. It was followed by the vessel *Sankhatali* (the treasure of shells). Its principal parts were made of sandal wood. Behind it sailed the vessel '*Ajlā-kajlā*.' It used to devour a hundred goats at every turn of the river (meaning that its size was so big that at every turn its motion had to be ensured by a sacrifice of hundred goats). Thus one by one the ships sailed with the merchant for *Gangāsāgar*."

The following description taken from Bangsidas (p. 288) may also be noted :—

"The first vessel which Chand launched on water was '*Madhukara*.' Its deck was filled with earth, so that it took the appearance of land upon which a small town with markets were established. The foredeck was reserved for worship. A tank of fresh water was not wanting in it with aquatic plants on its surface to keep it cool and with fishes of various descriptions. A vegetable and a flower garden completed the outfit of this wonderful ship. The merchant Chand ascertained the cost of this ship to be fourteen lacs of rupees as may be gathered from what he said to his treasurer Govinda. He furthermore said that the merchandise on board this vessel was worth the same amount.

See also Bangsidas, p. 319 :—

First started *Sankhachur* followed by "*Chhatighati*" (the ship of wares) which was filled with earthen wares. Then "*Kajal-rekhi*" (Lined with collyrium), "*Durgabar*" (the Boon of Durga), and "*Manikyamerua*" (the Diamond-crowned) sailed one after another. The last was so big that it had to be driven by sixteen hundred oarsmen. Then sailed '*Rajballav*' (the favourite of the king), '*Hansakhal*' (the Royal Duck), and '*Sagarfena*' (the sea-foam) one behind the other. The last one was full of tamil soldiers. Behind these ships came '*Udaygiri*' (the mountain of the rising sun) followed by "*Lakshipashā*" (the abode of the harvest goddess). In the latter ship the priest Subhai took up his residence with all the requisites for worshipping *Hara-Gauri*. The next two vessels were "*Udaytara*" (the Morning Star) and "*Gangaprasad*" (the Favour of the Ganges) respectively. The last one of the fourteen ships was the flagship termed "*Madhukara*" (the Bee) which was the best of the lot. In it the merchant Chand, the lord of the fleet, established his quarters with his five advisers. During the voyage the crew sang *sari* songs (a kind of chorus) all the while."

Another description is given below from Kabikankan, p. 191 :—

"First was recovered from water the ship "*Madhukara*." Its drawing-room was made of solid gold. Then came the turn of *Durgābar*. It was full of *Gābar* or sailors. Then came to sight the ship "*Guarekhi*." Its mast (*Malumwood*) might be seen from a distance of six miles. Another ship which rose up was named *Sankhachur*. It was so big that it had a breadth of eighty yards. Another ship named *Chandrapal* was also recovered from water. Its breadth was so great that when sailing its sides almost touched the banks of the river. The

seventh and the last vessel was named *Chhatimati* which had a cargo of rice."

In spite of the exaggerated descriptions of the poets that we ordinarily come across about big vessels it must not be construed that smaller crafts were lost sight of by them. We find in Bangsidas, p. 320, the following, "The admiral Gopal who sailed first had with him forty-two small boats (*hat nāo*). The construction of the river boats and sea-going ships are now precisely of the same type as we find it in the old literature, and the nomenclature adopted in the past was on the whole the same as we use it now. It seems that the sea-going vessels and the rivercrafts were built on the same principle. Even the other day a coasting vessel named *Aminakhatun* and its sister vessels of considerable tonnage were built by a merchant of Chittagong with the help of local carpenters and mechanics and the method of building they adopted, appears to be the same as it was done in the past. The strong build and the high speed of these sailing ships were perhaps not inferior to those of similar ships used in England in the days of Nelson. The coincidence of keeping a flagship in the mercantile marine as we find to-day in the navy of the civilised nations is curious indeed. The numbers of ships, seven and fourteen, which the merchants of old generally adopted in completing a fleet were perhaps due to the notion that these numbers were auspicious. For a fuller information about the old Bengali vessels reference may be made to the Folk-Literature of Bengal, pp. 65, 75 and 249.

Among the crew the following may be noted :—

(1) *Gābar* (sailors) who were of two classes.

(a) *Mānjhi* or Oarsmen. (b) *Dāri* or *Karnadhār* (helmsmen).

(2) *Sutradhar* (carpenter).

- (3) Karmakār (blacksmith).
- (4) Pāik (foot soldiers).
- (5) Dubāri (Diver).
- (6) Mirbahar (admiral).
- (7) Kārikar (craftsman of various description).
- (8) Kārāri (helmsman and captain).

Gābar.—A sailor. The caste from which boatmen were generally recruited is still known in Bengal as *Gābar*. They were exceptionally sturdy as the term "*Gaithyār-gābar*," applied to them, signifies great physical strength. The sailors used to sing a chorus called *sāri* when plying their oars. See History of Bengali Language and Literature, p. 396. See also *Satyanarayana Punthi* edited by Abdul Karim and *Manasa Mangal* poems for *Gābar*. The sailors were mainly East Bengal people. See Kabikankan, pp. 198 and 207-208. For plying vessels the *Gābars* used 'Danda' (helm), *Danda kerwāls* (oars), *Bangsakerwāls* (bamboo-poles) and *Fāns* (chords). See p. 195, Kabikankan. See also Kabikankan, pp. 227, 228, 207, 229, 234, 236, 194 for *Gabar*, *Kerwals*, etc.

Sutradhar (carpenter).—Carpenters were needed for repairs and joining of parts; they supplied the necessary crew corresponding to an Engineering staff maintained on board a modern ship.

Karmakār (Blacksmith).—Blacksmiths were engaged in building a ship and as their services were considered indispensable, they were taken on board the ships.

Pāik (foot-soldiers).—They were taken on board the vessels engaged in mercantile pursuits due perhaps to the insecurity of the age. They were engaged to protect the valuable merchandise against any possible attack of pirates or hostile foreigners. The soldiers engaged belonged to different countries. See Bangsidas, p. 329. Mention is found of the Telegu soldiers employed by

the Bengalis in the *Manasā-mangal* and the *Dharma-mangal* poems.

Dubāri, or divers.—They accompanied sea-going merchant vessels to ascertain if there was anything wrong in that part of a vessel which remained under the water. See Bangsidas, p. 329.

Mirbahar (Admiral).—It is an abbreviation of the Arabic term *Amir-al-Bahar* meaning an admiral of a fleet. The admirals would accompany not only warships but also armed merchantmen as appears from the description of Chand's voyage of trade. In Bangsidās we find the admiral Gopal accompanying the expedition of carpenters in quest of *Manapaban* wood perhaps to protect them from any possible aggression. This precaution was necessary to provide against the insecurity of the age.

Merchandise.—As for merchandise on board the Bengali vessels it may be said that our poets described them as mainly intended for export to *Pātan* and Singhal. A system of barter was generally resorted to and fraud played by the Bengali merchants on foreigners of questionable civilization was a theme of our poets on which all of them wrote in the same strain. We find occasional mention of merchandise, but the prices are sometimes ludicrously exaggerated, as during the time when these Bengali works were written, sea-voyage was reduced to a vague tradition in which facts and fiction were hopelessly blended together. Still we give below two lists which no doubt contain some elements of truth. According to Bangsidas it was the Bengali merchants who introduced cocoanuts and betels in some foreign countries. The stories given seem, however, to be mere legend.

A.

Items of Bengali
merchandise.

Articles of
foreign countries.

in exchange of

- | | | |
|---|-----|--|
| (1) Betel leaves | ... | Ten emeralds for each leaf. |
| (2) Betel-nut | ... | Ten gems. |
| (3) Lime | ... | Quick-silver. |
| (4) Catechew | ... | Gorachana (a bright yellow pigment). |
| (5) Cardamom | ... | Pearl. |
| (6) Satabari Kámeswar
(<i>Asparagus racemosus</i>) | | Musk. |
| (7) Fruits | ... | Golden bricks, bells, etc. |
| (8) Vegetable roots | ... | Diamond. |
| (9) Pulses | ... | Corals. |
| (10) Onions and garlies | ... | Maces. |
| (11) Camphor | ... | "Bakhar." |
| (12) Water weeds | ... | Diamond. |
| (13) <i>Dolichos gladiatus</i>
(Makhana) | ... | Ruby. |
| (14) Goats and sheep | ... | Golden does. |
| (15) Radish | ... | Ivory. |
| (16) Dry fish | ... | Sandal wood. |
| (17) Sugarcane | ... | Royal maces (Nabadanda—sign of royalty). |
| (18) Jute | ... | Chowrie (chāmar). |
| (19) Wooden utensils | ... | Golden and silver utensils. |
| (20) Wooden furniture | ... | Golden furniture. |
| (21) Earthenwares | ... | Bell-metal utensils. |
| (22) Oil and clarified butter | ... | Quick-silver. |
| (23) Kumkum | ... | Jarful of honey. |
| (24) Puppy | ... | String of golden bells. |
| (25) Mosquito curtains, beddings, trousers, etc., all made of gunny cloth | | Silken clothes and curtains, etc. |

See Bangsidas, p. 344, for the above list.

B.

Items of Bengali merchandise.		Articles of foreign countries.
	in exchange of	
(1) Deer	...	Horse.
(2) "Biranga "	...	Clove.
(3) Suntha	...	Tanka (a kind of wood apple, <i>Feronia Elephantum</i>).
(4) Ape	...	Elephant.
(5) Pigeon	...	Suā (A bristly Caterpillar).
(6) Fruits	...	"Jayfal."
(7) Bahara	...	Betel-nut.
(8) Jute	...	White chowrie (chāmar).
(9) Glass	...	Emerald.
(10) Sea salt	...	Rock salt.
(11) Dhuti (cloth)	...	Pots.
(12) Oystershell	...	Pearl.
(13) Harital	...	Diamond.
(14) "Joani."	...	"Jira."
(15) "Chua."	...	Sandal-paste.
(16) Sheep	...	Horse.

See Kabikankan Mukundaram's Chandi Kabya, p. 191—Dhanapati's exchange of merchandise in Ceylon—for the above list. The exchange of commodities here seems to be somewhat more reasonable than that to be found in Bangsidas.

The Bengali merchants carried on trade with Ceylon and Patan in Gujrat and visited the following notable ports :—

1. Puri.
2. Kalinga or Calingapatam.
3. Chilkachuli or Chicacole in Madras Presidency.
4. Banpur.
5. Setubandha Rameswar.

6. City of Lanka (in the site of Lanka Singhal or Ceylon).
7. Nilacca or Laccadives.
8. Patan.

One of the chief places outside India visited by the Bengali merchants was the Laccadives. Mention is made also of *Pralamba*, *Nakut*, *Aheelanka Chandrasalya* island and *Abartana* island which we cannot identify but which undoubtedly lay outside our country. Vivid description of the coasting voyage of the Bengali vessels from *Saptagrām* (an inland port of Bengal) to Patan in Gujrat by doubling the Cape of Comorin, is found in the *Manasāmangal* poem of Bangsidas. In *Chandikāvya* by Kabikankan Mukundaram we find accounts of mercantile adventurers of Bengal related in glowing terms. The lists of ports, both Indian and foreign, and the condition of sea-voyage tally in both these works.

In Bangsidās we meet with the following description of the voyage of Chand, the merchant. In spite of fancy and exaggeration a rough idea of the sea-routes and ports may be gleaned from it.

“The merchant started for South Patan. There were great celebrations and festivities at the city of Champaka. All the ships sailed one after another; at the head of the Vanguard was the admiral Gopal with forty-two small vessels. After leaving his own territory Chand passed the following places in succession—*Kāmārhati*, *Madhyānagar*, *Pratupgarh*, *Gopālpur* and *Rāmnagar*. He then reached *Kālidah Sāgar* which he crossed leaving to the right *Gandharvapur* and to the left *Birnagar*. Then the merchant reached the mouths of the Ganges after passing *Kāmeswar*, *Mandarerthana*, *Pichalta* and *Rambishnupuri* one after another. At Gangasagar Chand performed worship and sacrificed goats. After leaving Champaknagar the ships were on the voyage for five months. The

merchant passed through many difficult places after having reached the sea. He passed Utkal and Kalinga on his right. Crabs, lobsters, leeches and crocodiles obstructed his passage through the malice of *Manasā Devi*. At last the merchant reached the golden *Lanka* surrounded by golden walls. Chand here saw the *Rakshasa* king and received his pass-port before proceeding further. Then he left *Lanka* on his right and passed the *Malaya* mountain near *Cape Comorin*. He passed also *Bijohnagar* (Ceylonese?) then ruled by King *Ahi*. The next important place which the merchant passed was *Parasuramtirtha*. Leaving this place the merchant reached the vast sea known as the "*Nilaccarbunk*" (lit. bend of sea near *Nilacca*—perhaps *Laccadives*). Reaching this sea the crew felt giddy at the vast expanse of water and deep sound of the waves, big as mountains. They almost lost their way but through the expert direction of Captain *Dulai* the vessels were steered rightly. It was by looking to the stars that *Dulai* could keep the right course. After much trouble the merchant *Chand* and his companions reached the city of *Pātan* then ruled by King *Chandraketu*. (See *Bangsidas*, pp. 318-338.)

On *Chand's* return from *Pātan* he passed the *Laccadives* sea, the *Vindya* ranges, *Lanka*, *Setubandha* *Rameswar*, the gulfs were infested with crocodiles, leeches, etc., and reached *Kalidahsagar* where he experienced heavy storm. (See *Bansidas*, pp. 396-399.) "

The above description leads us to think that *Pātan*, once a celebrated city in *Gujrat*, was much frequented by the *Bengali* merchants who reached the place by sea crossing the *Bay of Bengal*, part of *Indian ocean* and the *Arabian Sea*. The voyage was probably a coasting one and *Ceylon* which stood mid-way between *Bengal* and *Gujrat* by the sea route, was a favourite place of

commerce for the merchants. Pātan is not an inland city similar to that of Tamralipti or Tamluk which was once one of the greatest seaports of Bengal. *Pātan* though means a city such as *Lalitpātan* yet the frequent mention of this particular Pātan and the way leading to it makes us think that it is no other than the Pātan or Somnāth Pātan of Gujrat and not a fanciful creation of our poets.

As for the foreign countries and ports, it seems our merchants frequented the islands and ports of the Bay of Bengal and the Arabian Sea as have already been seen. We see the following in Bijoy Gupta's *Manasāmangal* :—

“ O, merchant, listen. In the north King Mukteswar reigns. It is very difficult to comprehend the ways of his people. They take the seeds of pepper for rice. The king of the east is known as Bidyā-Sanga. The greater the bulk of a person the more respect is shown to him. The people are all degraded and the social customs are in a most pitiable condition. Marriage laws are not at all strict as brothers often exchange their wives. Even a brother marries his sister in that land. The women there enjoy complete freedom and use coloured cloth specially to cover the breast. Caste system is not observed at all. In the west the people are barbarous. They bore their ears, show laxity of caste distinction and use ornaments on the neck. They do not give the girls in marriage unless they are sixteen and even then they put the married girl for some time in priest's house in lieu of his fee. A married girl even keeps the house of her husband's sister's husband. In case of any issue being born it shares the property on both sides.¹

¹ The peculiar customs regarding inheritance such as inheritance of nephews as found in Bangsidas are still current among the Nairs. Preserving dead bodies mentioned in the same work show the knowledge of Buddhistic conditions. See Type set, p. 234.

Now hear the condition of Patan or the South Patan. Its king is *Bikram Keshari*. The people of this land is very rich. They keep jars full of gems. In their land conch shells, pearls, etc., are abundantly found as sea waves fling them frequently on the shore in particular phases of the moon. Even the poor there owned oysters and pearls."

The above lines though full of grotesque fiction seem to contain some grains of truth in them. By the north the poet perhaps indicates the foreign countries to north-east of Bengal. From Chittagong onwards to China the people are fond of taking excessive quantity of pepper with their meal. By the east the poet perhaps means the Buddhist Burma and the adjoining countries where owing to the influence of Buddhism, caste system is ignored and marriage laws are less rigorous. The Burmese women are very fond of coloured garments. Freedom of women is also to be found in Burma. By the western country the poet possibly means Madras Presidency which lies to the south-west of Bengal. As for Pātan, it may be said that, it was a rich city as otherwise Bengali merchant vessels would not be described as visiting that place for nothing.

See also *Kabikankan*, pages 195-196, for voyages of the Bengalees:—

"After the performance of the proper ceremonies before sailing, the merchant Dhanapati passed the following places,—Bhowsingerghat, Matiarisafar, Chandi-gachha, Bolanpur, Purathan, Nabadwip, Mirzapur, Ambna, Santipur, Guptipara, Ula, Khishma, Mahespur, Fulia and Halisahar—all by the side of the Ganges. Then he reached the very celebrated inland port of Bengal known as *Saptagram* by the side of the Tribeni. Here the poet incidentally praised this port and gave it a superior place among the following ports and places (some

of which are Indian and some foreign) known to the poet. They are the ports of Kalinga, Trailanga, Anga, Banga, Carnut, Mahendra, Magadha, Maharastra, Gujrat, Barendra, Vindhya, Pingal, Utkal, Dravir, Rarh, Bijohnagar, Maitra, Dwaraka, Kasi, Kankhal, Kekaya, Purabak, Anayuk, Godabari, Gaya, Sylhet, Kamrup, Koch, Hangar, Trihatta, Manika, Fatika, *Lanka*, *Pralamba*, *Nakutta*, Bagar, *Malay* (Indian), Kurukshetra, Bateswari, *Ahu Lanka*, Sibatatta, Mahanatta and Hastina, etc. According to the poet, the merchants of the above places visit Saptagram but the merchants of Saptagram do never visit those ports and places. (These prove the exaggerated notion of the poet about Saptagram).

At Saptagram the merchant took on board sufficient drinking water for his voyage; then he passed some other places of note by the river banks such as Nimaitirtha, Betarah, Bagan, Kalighat, Omulinga, Chhatrabhoga, Kalipar, Himai, Hetagarh, Sanketamadhaba, Madanmalla, Birkhana, Kalabati, and Dhuligram. On the way he experienced much storm on the river Magra. It took the merchant twenty days to reach the canal of *Angarpur*. Then his vessels entered the sea adjoining the country of the Dravidas. The first place of note was Puri celebrated for its temple of Jagannath. Then the merchant visited Chilkachuli, or Chicacole. Next ports of note were Balighata and Banpur which were left very soon. Then they reached the land of the Firinghees (Portuguese). They passed this place stealthily at night as they were afraid of these people who were very strong for their fleet of warships which were known as Harmada (Portuguese Armada, the Portuguese being very strong in ships in these parts). Dhanapati then passed some seas infested with crabs, snakes and crocodiles, etc., like Chand. After much difficulty he reached *Lanka*. Before reaching Lanka Dhanapati's vessels touched

Setubandha-Rameswar and crossed *Kalidaha* or Black Sea."

It is peculiar that *Kalidaha* which Bangsidas mentions to be near Bengal, Kabikankan places near Ceylon. It may be that any expanse of blue sea was taken by them to be *Kalidaha*. As for the mention of the Harmadas it may safely be said that they are matters of history. The Portuguese pirate vessels were for some time the curse of the eastern sea.

In the voyage of Srimanta, son of Dhanapati, we come across two islands namely, Chandrasalya and Abar-tana, both lying on the way to Ceylon. We cannot locate these two islands as we cannot locate Banpur "en route" to Chand's voyage for obvious reasons. Though there is evidently much exaggeration about the size of the ships, it is quite probable that the ships of the Bengali merchants were often of enormous size, for enormity of size was the fashion of the time. The Bengali poets had some traditions of the past, to which they added much that they derived from their imaginations.



SHIP-BUILDING AND COMMERCE
IN ANCIENT BENGAL

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Ship-building and Commerce in Ancient Bengal

BY

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From the records, I have come across in course of my researches in the field of old Bengali literature, it shows that ship-building reached a high degree of perfection both in regard to workmanship and efficiency in ancient Bengal when the sea-going ships were actively engaged in promoting the prosperity of the province by conducting commercial intercourse with various countries both within and outside India.

The wood required for the construction of ships were teak, *gāmbhāri*, *tamāl*, *peal*, jackwood, etc. But it seems, the wood of the fabled tree *Manapaban* was, however, best for the purpose. The name itself is poetic, signifying the utmost speed that a vessel would acquire if built with such wood. It was, however, foreign to Bengal and very difficult to be secured as we learn from an elaborate description in Bangsidas (p. 283).

In building a vessel the first work to be done was a ceremony known as 'Dārābindhā' or thrusting of a gold nail (Sonarjal) to the keel (Dārā) with the help of a silver hammer (hātur). It was done by the owner himself. After this ceremony, the actual work of construction was to begin. First a measurement of the vessel was to be taken. Then the keel (Dārā) was to be carefully

constructed with which strong pieces of timber were joined with the help of iron-nails. Next the 'galui' (prow) was to be built. This finished the hold of a vessel. The deck, the *pātātan* (pieces of timber joined to the keel) and the shed were also made. After these, the construction of helm and rudders, and decoration-work made the building of a ship complete. It may be noted that the prow took the appearance of a peacock or a Cuka bird or some other fancy shape specified in the works on art and the ships were accordingly known as "*Maur-pankhi*," "*Cukapankhi*," etc. Mention of seven types of prows representing the shapes of a lion, a buffalo, a serpent, an elephant, a tiger and a bird, is found in old Sanskrit literature, such as *Jātikalpataru*; see also *Viswakosh*, Vol. X, p. 461.

A vivid description of the construction of a vessel is found in *Bangsidas*, p. 286. An idea of this is given below :—

The Lord of Champaka (the merchant Chānd) constructed some vessels for which purpose he himself performed the ceremony of gold nailing (*Sonār-jal* or *jalai*). The length of the vessel was fixed at a thousand yards (more than half a mile, evidently exaggerated). From the keel to the central deck the height was six cubits and a half (thirteen *tāl*) to stabilize the equilibrium of a ship. The bamboo-poles for plying the vessels were also measured with thread. More serious work, however, commenced with the construction of the hold of a ship. The wood ordinarily chosen for the purpose was known as "*Manapaban*," noted for imparting swiftness of the wind to the ship on slightest wish. Very strong pieces of this timber were joined together with the help of iron-nails. Joints were covered by soldering to avoid saline water corroding the iron-nails. In this way the construction of the hold was completed. When it was

finished the metallic sheets (*pith-pāt*) were fitted and the mat doors (*jhāp*) fixed up. Then '*Māthākāstha*,' or, '*galui*' (prow) was made, decorated with golden and silver flowers. The principal cabin was built, after the deck composed of wooden planks had been fitted up (*pātātan*). This chief cabin (*Raighar*) was beautifully decorated with rows of artificial flower garlands. On the vessel the mast (*Malum wood*) was duly fitted. The helm (*pā'wāl*) and its auxiliary piece of timber (*jhokābāri*) were also not forgotten. When these had been finished, a nicely ornamented shed was built on the ship. It had rows of '*chāmar*' (chowri) and festoons of various types which made the vessel look pretty. Finally, the eyes of the figure on the prow of the ship were bedecked with jewels resembling the moon. This completed the building of the ship.

A similar description of ships as found in *Kabikankan* is given below (pp. 221-222):—

"Seven '*dingās*,' or, vessels were built by Biswakarmā and his son Dārubrahmā with the assistance of Hanumān. The mighty hero Hanumān began to saw the wood of various denominations such as '*Sāl*,' '*tāl*,' '*Kāthāl*,' '*peal*,' '*gāmbhāri*,' and, '*tamāl*.' The architect Dārubrahmā in the meantime made the iron nails. They made beautiful vessels each of which were hundred yards in length and twenty yards in breadth. The prow of each resembled the head of a *Makara* fish. It was made of ivory and the eye-balls were made of precious gems. First, the ship '*Madhukara*' was constructed. In its central part there was the '*raighar*' containing *rājāsan* or, the principal cabin for the merchant. A nook was reserved for the helmsman and the back part as the strong room for keeping treasures. There was also the mast on the vessel. Of the jack and the teakwoods *danda-kerwal* or the oars were made and a

helm was fitted to the prow of each vessel. The seven vessels were named :—

- (i) Madhukarā (the Bee)—the flagship.
- (ii) Guarekhi (its prow resembled the head of a Lion).
- (iii) Ranajayā (the Victory).
- (iv) Ranavima (the Terrible in war).
- (v) Mahakāya (the Titanic).
- (vi) Sarvadhara (the All-container).
- (vii) Nātsālā (the Amusement-hall).

The following were the principal parts of a vessel :—

- (i) Dārā (helm) or *patwāl*.¹
- (ii) Mālumkāstha (the mast).
- (iii) Talā (hold).
- (iv) Māthākāstha (prow).
- (v) Chhaighar (shed).
- (vi) Pātātan (deck).
- (vii) Dandakerwāl (Oar).
- (viii) Bangsakerwāl or Dhavaji (bamboo-pole).
- (ix) Fāns (chord).
- (x) Nangar (anchor).
- (xi) Pāl (sail).
- (xii) Dārā (Keel).

The above names are still used to convey the meaning they did in ancient Bengal. It would be interesting for the purpose of comparative study to find out if some of these technical words were analogous to those used in other parts of India in the literature of ship-building.

In the description, given above, we find elaborate details of the different parts of a ship built in those days. Exaggerated descriptions are, however, apparent, in the writings of Bijoy Gupta specially, who flourished

¹ Dara in the present dialect of the countryside means an oar, but in our old books it has oftentimes the meaning given above.

in the fifteenth century, when ship-building as an art was practically abandoned in Bengal. But though there is much of legend in the stories, the old traditions were not altogether lost sight of. Ships of considerable tonnage for commercial purposes were surely still being constructed. See Kabikankan, p. 220. "If hundred carpenters work for a whole year, only one vessel is constructed"; see Bangsidas, p. 285, "sixteen hundred carpenters cut the branches of the 'Manpaban' tree and piled them up in rows"; see also Bangsidas, p. 282, "By the command of the king, the chief engineer Giribar and the admiral Gopal started with sixteen hundred carpenters." The descriptions of voyages often go to show that ships of titanic dimensions used to be constructed in Bengal even if sufficient allowances are made for poetic exaggerations. In Bijoy Gupta we find the following:—

"First was launched the *Madhukara*. On it the millionaire Chand took his residence. It was followed by the ship called '*Biju-siju*.' This ship was so big that it broke the crooked projections of the banks levelling them on its way owing to its very big dimensions. Then sailed the *Guarekhi*. It was so high that the city of Lanka, situated a long way off, was visible from its deck. After it, sailed, "*Bharar-Patua*." All the Tamil people were on board this ship. It was followed by "*Sankha-chur*" (the Shell-crowned). It was so gigantic a ship that its sides seemed to touch two opposite shores of big rivers and its bottom the ground under water. Next started "*Ajayshelpet*" (the Invincible steel-bottomed). There was arrangement for a big fair on it. Then could be seen the ship '*Udaytara*' (the Morning star); its length was so extraordinary that when half the portion suffered from rain, the other half enjoyed sunshine. Then sailed '*Tiathuti*' (the Parrot-beaked). It was full of merchandise, such as jute

and coarse blankets, etc. Then followed *Dhabal* (the white). It was so big that it moved slowly and often stopped owing to its great bulk when it was to be set in motion again by sacrificing a hundred goats to propitiate the sea-god. Then sailed '*Kedar*' (the great God Siva). Before reaching the shore it had to be worshipped with incense and *Panchapradip* as is done in a temple when performing the evening service. Then came "*Pakshiraj*" (the Prince of birds). Many fruit trees of considerable size were there for use of the people on board the ship. Then was launched the ship "*Bhimaksha*" (the fierce-eyed). Upon it was taken conch shells numbering fourteen lacs. It was followed by the vessel *Sankhatali* (the treasure of shells). Its principal parts were made of sandal wood. Behind it sailed the vessel '*Ajlā-kajlā*.' It used to devour a hundred goats at every turn of the river (meaning that its size was so big that at every turn its motion had to be ensured by a sacrifice of hundred goats). Thus one by one the ships sailed with the merchant for *Gangāsagar*."

The following description taken from Bangsidas (p. 288) may also be noted :—

"The first vessel which Chand launched on water was '*Madhukara*.' Its deck was filled with earth, so that it took the appearance of land upon which a small town with markets were established. The foredeck was reserved for worship. A tank of fresh water was not wanting in it with aquatic plants on its surface to keep it cool and with fishes of various descriptions. A vegetable and a flower garden completed the outfit of this wonderful ship. The merchant Chand ascertained the cost of this ship to be fourteen lacs of rupees as may be gathered from what he said to his treasurer Govinda. He furthermore said that the merchandise on board this vessel was worth the same amount.

See also Bangsidas, p. 319 :—

First started *Sankhachur* followed by "*Chhatighati*" (the ship of wares) which was filled with earthen wares. Then "*Kajal-rekhi*" (Lined with collyrium), "*Durgabar*" (the Boon of Durga), and "*Manikyamerua*" (the Diamond-crowned) sailed one after another. The last was so big that it had to be driven by sixteen hundred oarsmen. Then sailed '*Rajballav*' (the favourite of the king), '*Hansakhal*' (the Royal Duck), and '*Sagarfena*' (the sea-foam) one behind the other. The last one was full of tamil soldiers. Behind these ships came '*Udaygiri*' (the mountain of the rising sun) followed by "*Lakshipashā*" (the abode of the harvest goddess). In the latter ship the priest Subhai took up his residence with all the requisites for worshipping *Hara-Gauri*. The next two vessels were "*Udaytara*" (the Morning Star) and "*Gangaprasad*" (the Favour of the Ganges) respectively. The last one of the fourteen ships was the flagship termed "*Madhukara*" (the Bee) which was the best of the lot. In it the merchant Chand, the lord of the fleet, established his quarters with his five advisers. During the voyage the crew sang *sari* songs (a kind of chorus) all the while."

Another description is given below from Kabikankan, p. 191 :—

"First was recovered from water the ship "*Madhukara*." Its drawing-room was made of solid gold. Then came the turn of *Durgābar*. It was full of *Gābar* or sailors. Then came to sight the ship "*Guarekhi*." Its mast (*Malumwood*) might be seen from a distance of six miles. Another ship which rose up was named *Sankhachur*. It was so big that it had a breadth of eighty yards. Another ship named *Chandrapal* was also recovered from water. Its breadth was so great that when sailing its sides almost touched the banks of the river. The

seventh and the last vessel was named *Chhatimati* which had a cargo of rice."

In spite of the exaggerated descriptions of the poets that we ordinarily come across about big vessels it must not be construed that smaller crafts were lost sight of by them. We find in Bangsidas, p. 320, the following, "The admiral Gopal who sailed first had with him forty-two small boats (*hat nāo*). The construction of the river boats and sea-going ships are now precisely of the same type as we find it in the old literature, and the nomenclature adopted in the past was on the whole the same as we use it now. It seems that the sea-going vessels and the rivercrafts were built on the same principle. Even the other day a coasting vessel named *Aminakhatun* and its sister vessels of considerable tonnage were built by a merchant of Chittagong with the help of local carpenters and mechanics and the method of building they adopted, appears to be the same as it was done in the past. The strong build and the high speed of these sailing ships were perhaps not inferior to those of similar ships used in England in the days of Nelson. The coincidence of keeping a flagship in the mercantile marine as we find to-day in the navy of the civilised nations is curious indeed. The numbers of ships, seven and fourteen, which the merchants of old generally adopted in completing a fleet were perhaps due to the notion that these numbers were auspicious. For a fuller information about the old Bengali vessels reference may be made to the Folk-Literature of Bengal, pp. 65, 75 and 249.

Among the crew the following may be noted:—

- (1) Gābar (sailors) who were of two classes.
 - (a) Mānjhi or Oarsmen. (b) Dāri or Karnadhār (helmsmen).
- (2) Sutradhar (carpenter).

- (3) Karmakār (blacksmith).
- (4) Pāik (foot soldiers).
- (5) Dubāri (Diver).
- (6) Mirbahar (admiral).
- (7) Kārikar (craftsman of various description).
- (8) Kārāri (helmsman and captain).

Gābar.—A sailor. The caste from which boatmen were generally recruited is still known in Bengal as *Gābar*. They were exceptionally sturdy as the term "*Gaithyār-gābar*," applied to them, signifies great physical strength. The sailors used to sing a chorus called *sāri* when plying their oars. See History of Bengali Language and Literature, p. 396. See also *Satyanarayana Punthi* edited by Abdul Karim and *Manasa Mangal* poems for *Gābar*. The sailors were mainly East Bengal people. See Kabikankan, pp. 198 and 207-208. For plying vessels the *Gābars* used 'Danda' (helm), *Danda kerwāls* (oars), *Bangsakerwāls* (bamboo-poles) and *Fāns* (chords). See p. 195, Kabikankan. See also Kabikankan, pp. 227, 228, 207, 229, 234, 236, 194 for *Gabar*, *Kerwals*, etc.

Sutradhar (carpenter).—Carpenters were needed for repairs and joining of parts; they supplied the necessary crew corresponding to an Engineering staff maintained on board a modern ship.

Karmakār (Blacksmith).—Blacksmiths were engaged in building a ship and as their services were considered indispensable, they were taken on board the ships.

Pāik (foot-soldiers).—They were taken on board the vessels engaged in mercantile pursuits due perhaps to the insecurity of the age. They were engaged to protect the valuable merchandise against any possible attack of pirates or hostile foreigners. The soldiers engaged belonged to different countries. See Bangsidas, p. 329. Mention is found of the Telegu soldiers employed by

the Bengalis in the Manasā-mangal and the Dharma-mangal poems.

Dubāri, or divers.—They accompanied sea-going merchant vessels to ascertain if there was anything wrong in that part of a vessel which remained under the water. See Bangsidas, p. 329.

Mirbahar (Admiral).—It is an abbreviation of the Arabic term Amir-al-Bahar meaning an admiral of a fleet. The admirals would accompany not only warships but also armed merchantmen as appears from the description of Chand's voyage of trade. In Bangsidas we find the admiral Gopal accompanying the expedition of carpenters in quest of *Manapaban* wood perhaps to protect them from any possible aggression. This precaution was necessary to provide against the insecurity of the age.

Merchandise.—As for merchandise on board the Bengali vessels it may be said that our poets described them as mainly intended for export to *Pātan* and Singhal. A system of barter was generally resorted to and fraud played by the Bengali merchants on foreigners of questionable civilization was a theme of our poets on which all of them wrote in the same strain. We find occasional mention of merchandise, but the prices are sometimes ludicrously exaggerated, as during the time when these Bengali works were written, sea-voyage was reduced to a vague tradition in which facts and fiction were hopelessly blended together. Still we give below two lists which no doubt contain some elements of truth. According to Bangsidas it was the Bengali merchants who introduced cocoanuts and betels in some foreign countries. The stories given seem, however, to be mere legend.

A.

Items of Bengali merchandise.	Articles of foreign countries.
in exchange of	
(1) Betel leaves	... Ten emeralds for each leaf.
(2) Betel-nut	... Ten gems.
(3) Lime	... Quick-silver.
(4) Catechew	... Gorachana (a bright yellow pigment).
(5) Cardamom	... Pearl.
(6) Satabari Kámeswar (<i>Asparagus racemosus</i>)	Musk.
(7) Fruits	... Golden bricks, bells, etc.
(8) Vegetable roots	... Diamond.
(9) Pulses	... Corals.
(10) Onions and garlies	... Maces.
(11) Camphor	... "Bakhar."
(12) Water weeds	... Diamond.
(13) <i>Dolichos gladiatus</i> (Makhana)	... Ruby.
(14) Goats and sheep	... Golden does.
(15) Radish	... Ivory.
(16) Dry fish	... Sandal wood.
(17) Sugarcane	... Royal maces (Nabadanda —sign of royalty).
(18) Jute	... Chowrie (chāmar).
(19) Wooden utensils	... Golden and silver utensils.
(20) Wooden furniture	... Golden furniture.
(21) Earthenwares	... Bell-metal utensils.
(22) Oil and clarified butter	Quick-silver.
(23) Kumkum	... Jarful of honey.
(24) Puppy	... String of golden bells.
(25) Mosquito curtains, bed- dings, trousers, etc., all made of gunny cloth	Silken clothes and curtains, etc.

See Bangsidas, p. 314, for the above list.

B.

Items of Bengali merchandise.		Articles of foreign countries.
in exchange of		
(1) Deer	...	Horse.
(2) "Biranga "	...	Clove.
(3) Suntha	...	Tanka (a kind of wood apple, <i>Feronia Elephantum</i>).
(4) Ape	...	Elephant.
(5) Pigeon	...	Suā (A bristly Caterpillar).
(6) Fruits	...	"Jayfal."
(7) Bahara	...	Betel-nut.
(8) Jute	...	White chowrie (chāmar).
(9) Glass	...	Emerald.
(10) Sea salt	...	Rock salt.
(11) Dhuti (cloth)	...	Pots.
(12) Oystershell	...	Pearl.
(13) Harital	...	Diamond.
(14) "Joani."	...	"Jira."
(15) "Chua."	...	Sandal-paste.
(16) Sheep	...	Horse.

See Kabikankan Mukundaram's Chandi Kabya, p. 191—Dhanapati's exchange of merchandise in Ceylon—for the above list. The exchange of commodities here seems to be somewhat more reasonable than that to be found in Bangsidas.

The Bengali merchants carried on trade with Ceylon and Patan in Gujrat and visited the following notable ports :—

1. Puri.
2. Kalinga or Calingapatam.
3. Chilkachuli or Chicacole in Madras Presidency.
4. Banpur.
5. Setubandha Rameswar.

6. City of Lanka (in the site of Lanka Singhal or Ceylon).
7. Nilacca or Laccadives.
8. Patan.

One of the chief places outside India visited by the Bengali merchants was the Laccadives. Mention is made also of *Pralamba*, *Nakut*, *Aheelanka Chandrasalya* island and *Abartana* island which we cannot identify but which undoubtedly lay outside our country. Vivid description of the coasting voyage of the Bengali vessels from *Saptagrām* (an inland port of Bengal) to Patan in Gujrat by doubling the Cape of Comorin, is found in the *Manasāmangal* poem of Bangsidas. In *Chandikāvya* by Kabikankan Mukundaram we find accounts of mercantile adventurers of Bengal related in glowing terms. The lists of ports, both Indian and foreign, and the condition of sea-voyage tally in both these works.

In Bangsidās we meet with the following description of the voyage of Chand, the merchant. In spite of fancy and exaggeration a rough idea of the sea-routes and ports may be gleaned from it.

“The merchant started for South Patan. There were great celebrations and festivities at the city of Champaka. All the ships sailed one after another; at the head of the Vanguard was the admiral Gopal with forty-two small vessels. After leaving his own territory Chand passed the following places in succession—*Kāmārhati*, *Madhyānagar*, *Pratupgarh*, *Gopālpur* and *Rāmnagar*. He then reached *Kālidah Sāgar* which he crossed leaving to the right *Gandharvapur* and to the left *Birnagar*. Then the merchant reached the mouths of the Ganges after passing *Kāmeswar*, *Mandarerthana*, *Pichalta* and *Rambishnupuri* one after another. At Gangasagar Chand performed worship and sacrificed goats. After leaving Champaknagar the ships were on the voyage for five months. The

merchant passed through many difficult places after having reached the sea. He passed Utkal and Kalinga on his right. Crabs, lobsters, leeches and crocodiles obstructed his passage through the malice of *Manasā Devi*. At last the merchant reached the golden *Lanka* surrounded by golden walls. Chand here saw the *Rakshasa* king and received his pass-port before proceeding further. Then he left *Lanka* on his right and passed the *Malaya* mountain near *Cape Comorin*. He passed also *Bijohnagar* (Ceylonese?) then ruled by King *Ahi*. The next important place which the merchant passed was *Parasuramtirtha*. Leaving this place the merchant reached the vast sea known as the "*Nilaccarbunk*" (lit. bend of sea near *Nilacca*—perhaps *Laccadives*). Reaching this sea the crew felt giddy at the vast expanse of water and deep sound of the waves, big as mountains. They almost lost their way but through the expert direction of Captain *Dulai* the vessels were steered rightly. It was by looking to the stars that *Dulai* could keep the right course. After much trouble the merchant *Chand* and his companions reached the city of *Pātan* then ruled by King *Chandraketu*. (See *Bangsidas*, pp. 318-338.)

On *Chand's* return from *Pātan* he passed the *Laccadives* sea, the *Vindya* ranges, *Lanka*, *Setubandha* *Rameswar*, the gulfs were infested with crocodiles, leeches, etc., and reached *Kalidahsagar* where he experienced heavy storm. (See *Bansidas*, pp. 396-399.) "

The above description leads us to think that *Pātan*, once a celebrated city in *Gujrat*, was much frequented by the *Bengali* merchants who reached the place by sea crossing the *Bay of Bengal*, part of *Indian ocean* and the *Arabian Sea*. The voyage was probably a coasting one and *Ceylon* which stood mid-way between *Bengal* and *Gujrat* by the sea route, was a favourite place of

commerce for the merchants. Pātan is not an inland city similar to that of Tamralipti or Tamluk which was once one of the greatest seaports of Bengal. *Pātan* though means a city such as *Lalitpātan* yet the frequent mention of this particular Pātan and the way leading to it makes us think that it is no other than the Pātan or Somnāth Pātan of Gujrat and not a fanciful creation of our poets.

As for the foreign countries and ports, it seems our merchants frequented the islands and ports of the Bay of Bengal and the Arabian Sea as have already been seen. We see the following in Bijoy Gupta's *Manasāmangal*:—

“O, merchant, listen. In the north King Mukteswar reigns. It is very difficult to comprehend the ways of his people. They take the seeds of pepper for rice. The king of the east is known as Bidyā-Sanga. The greater the bulk of a person the more respect is shown to him. The people are all degraded and the social customs are in a most pitiable condition. Marriage laws are not at all strict as brothers often exchange their wives. Even a brother marries his sister in that land. The women there enjoy complete freedom and use coloured cloth specially to cover the breast. Caste system is not observed at all. In the west the people are barbarous. They bore their ears, show laxity of caste distinction and use ornaments on the neck. They do not give the girls in marriage unless they are sixteen and even then they put the married girl for some time in priest's house in lieu of his fee. A married girl even keeps the house of her husband's sister's husband. In case of any issue being born it shares the property on both sides.¹

¹ The peculiar customs regarding inheritance such as inheritance of nephews as found in Bangsidas are still current among the Nairs. Preserving dead bodies mentioned in the same work show the knowledge of Buddhistic conditions. See Type set, p. 234.

Now hear the condition of Patan or the South Patan. Its king is *Bikrom Keshari*. The people of this land is very rich. They keep jars full of gems. In their land conch shells, pearls, etc., are abundantly found as sea waves fling them frequently on the shore in particular phases of the moon. Even the poor there owned oysters and pearls."

The above lines though full of grotesque fiction seem to contain some grains of truth in them. By the north the poet perhaps indicates the foreign countries to north-east of Bengal. From Chittagong onwards to China the people are fond of taking excessive quantity of pepper with their meal. By the east the poet perhaps means the Buddhist Burma and the adjoining countries where owing to the influence of Buddhism, caste system is ignored and marriage laws are less rigorous. The Burmese women are very fond of coloured garments. Freedom of women is also to be found in Burma. By the western country the poet possibly means Madras Presidency which lies to the south-west of Bengal. As for Pātan, it may be said that, it was a rich city as otherwise Bengali merchant vessels would not be described as visiting that place for nothing.

See also *Kabikankan*, pages 195-196, for voyages of the Bengalees:—

"After the performance of the proper ceremonies before sailing, the merchant Dhanapati passed the following places,—Bhowsingerghat, Matiarisafar, Chandi-gachha, Bolanpur, Purathan, Nabadwip, Mirzapur, Ambna, Santipur, Guptipara, Ula, Khishma, Mahespur, Fulia and Halisahar—all by the side of the Ganges. Then he reached the very celebrated inland port of Bengal known as *Saptagram* by the side of the Tribeni. Here the poet incidentally praised this port and gave it a superior place among the following ports and places (some

of which are Indian and some foreign) known to the poet. They are the ports of Kalinga, Trailanga, Anga, Banga, Carnut, Mahendra, Magadha, Maharastra, Gujrat, Barendra, Vindhya, Pingal, Utkal, Dravir, Rarh, Bijohnagar, Maitra, Dwaraka, Kasi, Kankhal, Kekaya, Purabak, Anayuk, Godabari, Gaya, Sylhet, Kamrup, Koch, Hangar, Trihatta, Manika, Fatika, *Lanka*, *Pralamba*, *Nakutta*, Bagar, *Malay* (Indian), Kurukshetra, Bateswari, *Ahu Lanka*, Sibatatta, Mahanatta and Hastina, etc. According to the poet, the merchants of the above places visit Saptagram but the merchants of Saptagram do never visit those ports and places. (These prove the exaggerated notion of the poet about Saptagram).

At Saptagram the merchant took on board sufficient drinking water for his voyage; then he passed some other places of note by the river banks such as Nimaitirtha, Betarah, Bagan, Kalighat, Omulinga, Chhatrabhoga, Kalipar, Himai, Hetagarh, Sanketamadhaba, Madanmalla, Birkhana, Kalahati, and Dhuligram. On the way he experienced much storm on the river Magra. It took the merchant twenty days to reach the canal of *Angarpur*. Then his vessels entered the sea adjoining the country of the Dravidas. The first place of note was Puri celebrated for its temple of Jagannath. Then the merchant visited Chilkachuli, or Chicacole. Next ports of note were Balighata and Banpur which were left very soon. Then they reached the land of the Firinghees (Portuguese). They passed this place stealthily at night as they were afraid of these people who were very strong for their fleet of warships which were known as Harmada (Portuguese Armada, the Portuguese being very strong in ships in these parts). Dhanapati then passed some seas infested with crabs, snakes and crocodiles, etc., like Chand. After much difficulty he reached *Lanka*. Before reaching Lanka Dhanapati's vessels touched

Setubandha-Rameswar and crossed *Kalidaha* or Black Sea."

It is peculiar that *Kalidaha* which Bangsidas mentions to be near Bengal, Kabikankan places near Ceylon. It may be that any expanse of blue sea was taken by them to be *Kalidaha*. As for the mention of the Harmadas it may safely be said that they are matters of history. The Portuguese pirate vessels were for some time the curse of the eastern sea.

In the voyage of Srimanta, son of Dhanapati, we come across two islands namely, Chandrasalya and Abar-tana, both lying on the way to Ceylon. We cannot locate these two islands as we cannot locate Banpur "en route" to Chand's voyage for obvious reasons. Though there is evidently much exaggeration about the size of the ships, it is quite probable that the ships of the Bengali merchants were often of enormous size, for enormity of size was the fashion of the time. The Bengali poets had some traditions of the past, to which they added much that they derived from their imaginations.



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From the records, I have come across in course of my researches in the field of old Bengali literature, it shows that ship-building reached a high degree of perfection both in regard to workmanship and efficiency in ancient Bengal when the sea-going ships were actively engaged in promoting the prosperity of the province by conducting commercial intercourse with various countries both within and outside India.

The wood required for the construction of ships were teak, *gāmbhāri*, *tamāl*, *peal*, jackwood, etc. But it seems, the wood of the fabled tree *Manapaban* was, however, best for the purpose. The name itself is poetic, signifying the utmost speed that a vessel would acquire if built with such wood. It was, however, foreign to Bengal and very difficult to be secured as we learn from an elaborate description in Bangsidas (p. 283).

In building a vessel the first work to be done was a ceremony known as 'Dārābindhā' or thrusting of a gold nail (Sonarjal) to the keel (Dārā) with the help of a silver hammer (hātur). It was done by the owner himself. After this ceremony, the actual work of construction was to begin. First a measurement of the vessel was to be taken. Then the keel (Dārā) was to be carefully

constructed with which strong pieces of timber were joined with the help of iron-nails. Next the 'galui' (prow) was to be built. This finished the hold of a vessel. The deck, the *pātātan* (pieces of timber joined to the keel) and the shed were also made. After these, the construction of helm and rudders, and decoration-work made the building of a ship complete. It may be noted that the prow took the appearance of a peacock or a Cuka bird or some other fancy shape specified in the works on art and the ships were accordingly known as "*Maur-pankhi*," "*Cukapankhi*," etc. Mention of seven types of prows representing the shapes of a lion, a buffalo, a serpent, an elephant, a tiger and a bird, is found in old Sanskrit literature, such as *Jātikalpataru*; see also *Viswakosh*, Vol. X, p. 461.

A vivid description of the construction of a vessel is found in *Bangsidas*, p. 286. An idea of this is given below :—

The Lord of Champaka (the merchant Chānd) constructed some vessels for which purpose he himself performed the ceremony of gold nailing (*Sonār-jal* or *jalai*). The length of the vessel was fixed at a thousand yards (more than half a mile, evidently exaggerated). From the keel to the central deck the height was six cubits and a half (thirteen *tāl*) to stabilize the equilibrium of a ship. The bamboo-poles for plying the vessels were also measured with thread. More serious work, however, commenced with the construction of the hold of a ship. The wood ordinarily chosen for the purpose was known as "*Manapaban*," noted for imparting swiftness of the wind to the ship on slightest wish. Very strong pieces of this timber were joined together with the help of iron-nails. Joints were covered by soldering to avoid saline water corroding the iron-nails. In this way the construction of the hold was completed. When it was

finished the metallic sheets (pith-pāt) were fitted and the mat doors (jhāp) fixed up. Then ‘*Māthākāstha*,’ or, ‘*galui*’ (prow) was made, decorated with golden and silver flowers. The principal cabin was built, after the deck composed of wooden planks had been fitted up (*pātūtan*). This chief cabin (*Raighar*) was beautifully decorated with rows of artificial flower garlands. On the vessel the mast (*Malum wood*) was duly fitted. The helm (*pātwāl*) and its auxiliary piece of timber (*jhokābāri*) were also not forgotten. When these had been finished, a nicely ornamented shed was built on the ship. It had rows of ‘*chāmar*’ (chowri) and festoons of various types which made the vessel look pretty. Finally, the eyes of the figure on the prow of the ship were bedecked with jewels resembling the moon. This completed the building of the ship.

A similar description of ships as found in *Kabikankan* is given below (pp. 221-222):—

“Seven ‘*dingās*,’ or, vessels were built by Biswakarmā and his son Dārubrahmā with the assistance of Hanumān. The mighty hero Hanumān began to saw the wood of various denominations such as ‘*Sāl*,’ ‘*tāl*,’ ‘*Kāthāl*,’ ‘*peal*,’ ‘*gāmbhāri*,’ and, ‘*tamāl*.’ The architect Dārubrahmā in the meantime made the iron nails. They made beautiful vessels each of which were hundred yards in length and twenty yards in breadth. The prow of each resembled the head of a *Makara* fish. It was made of ivory and the eye-balls were made of precious gems. First, the ship ‘*Madhukara*’ was constructed. In its central part there was the ‘*raighar*’ containing *rājāsan* or, the principal cabin for the merchant. A nook was reserved for the helmsman and the back part as the strong room for keeping treasures. There was also the mast on the vessel. Of the jack and the teakwoods *danda-kerwal* or the oars were made and a

helm was fitted to the prow of each vessel. The seven vessels were named :—

- (i) Madhukarā (the Bee)—the flagship.
- (ii) Guarekhi (its prow resembled the head of a Lion).
- (iii) Ranajayā (the Victory).
- (iv) Ranavima (the Terrible in war).
- (v) Mahakāya (the Titanic).
- (vi) Sarvadhara (the All-container).
- (vii) Nātsālā (the Amusement-hall).

The following were the principal parts of a vessel :—

- (i) Dārā (helm) or *patiwāl*.¹
- (ii) Mālumkāstha (the mast).
- (iii) Talā (hold).
- (iv) Māthākāstha (prow).
- (v) Chhaighar (shed).
- (vi) Pātātan (deck).
- (vii) Dandakerwāl (Oar).
- (viii) Bangsakerwāl or Dhavaji (bamboo-pole).
- (ix) Fāns (chord).
- (x) Nangar (anchor).
- (xi) Pāl (sail).
- (xii) Dārā (Keel).

The above names are still used to convey the meaning they did in ancient Bengal. It would be interesting for the purpose of comparative study to find out if some of these technical words were analogous to those used in other parts of India in the literature of ship-building.

In the description, given above, we find elaborate details of the different parts of a ship built in those days. Exaggerated descriptions are, however, apparent, in the writings of Bijoy Gupta specially, who flourished

¹ Dara in the present dialect of the countryside means an ear, but in our old books it has oftentimes the meaning given above.

in the fifteenth century, when ship-building as an art was practically abandoned in Bengal. But though there is much of legend in the stories, the old traditions were not altogether lost sight of. Ships of considerable tonnage for commercial purposes were surely still being constructed. See Kabikankan, p. 220. "If hundred carpenters work for a whole year, only one vessel is constructed"; see Bangsidas, p. 285, "sixteen hundred carpenters cut the branches of the '*Manpaban*' tree and piled them up in rows"; see also Bangsidas, p. 282, "By the command of the king, the chief engineer Giribar and the admiral Gopal started with sixteen hundred carpenters." The descriptions of voyages often go to show that ships of titanic dimensions used to be constructed in Bengal even if sufficient allowances are made for poetic exaggerations. In Bijoy Gupta we find the following:—

"First was launched the *Madhukara*. On it the millionaire Chand took his residence. It was followed by the ship called '*Biju-siju*.' This ship was so big that it broke the crooked projections of the banks levelling them on its way owing to its very big dimensions. Then sailed the *Guarekhi*. It was so high that the city of Lanka, situated a long way off, was visible from its deck. After it, sailed, "*Bharar-Patua*." All the Tamil people were on board this ship. It was followed by "*Sankha-chur*" (the Shell-crowned). It was so gigantic a ship that its sides seemed to touch two opposite shores of big rivers and its bottom the ground under water. Next started "*Ajayshelpet*" (the Invincible steel-bottomed). There was arrangement for a big fair on it. Then could be seen the ship '*Udaytara*' (the Morning star); its length was so extraordinary that when half the portion suffered from rain, the other half enjoyed sunshine. Then sailed '*Tiathuti*' (the Parrot-beaked). It was full of merchandise, such as jute

and coarse blankets, etc. Then followed *Dhabal* (the white). It was so big that it moved slowly and often stopped owing to its great bulk when it was to be set in motion again by sacrificing a hundred goats to propitiate the sea-god. Then sailed '*Kedar*' (the great God Siva). Before reaching the shore it had to be worshipped with incense and *Panchapradip* as is done in a temple when performing the evening service. Then came "*Pakshiraj*" (the Prince of birds). Many fruit trees of considerable size were there for use of the people on board the ship. Then was launched the ship "*Bhimaksha*" (the fierce-eyed). Upon it was taken conch shells numbering fourteen lacs. It was followed by the vessel *Sankhatali* (the treasure of shells). Its principal parts were made of sandal wood. Behind it sailed the vessel '*Ajlā-kajlā*.' It used to devour a hundred goats at every turn of the river (meaning that its size was so big that at every turn its motion had to be ensured by a sacrifice of hundred goats). Thus one by one the ships sailed with the merchant for *Gangāsāgar*."

The following description taken from Bangsidas (p. 288) may also be noted :—

"The first vessel which Chand launched on water was '*Madhukara*.' Its deck was filled with earth, so that it took the appearance of land upon which a small town with markets were established. The foredeck was reserved for worship. A tank of fresh water was not wanting in it with aquatic plants on its surface to keep it cool and with fishes of various descriptions. A vegetable and a flower garden completed the outfit of this wonderful ship. The merchant Chand ascertained the cost of this ship to be fourteen lacs of rupees as may be gathered from what he said to his treasurer Govinda. He furthermore said that the merchandise on board this vessel was worth the same amount.

See also Bangsidas, p. 319 :—

First started *Sankhachur* followed by “*Chhatighati*” (the ship of wares) which was filled with earthen wares. Then “*Kajal-rekhi*” (Lined with collyrium), “*Durgabar*” (the Boon of Durga), and “*Manikyamerua*” (the Diamond-crowned) sailed one after another. The last was so big that it had to be driven by sixteen hundred oarsmen. Then sailed ‘*Rajballav*’ (the favourite of the king), ‘*Hansakhal*’ (the Royal Duck), and ‘*Sagerfena*’ (the sea-foam) one behind the other. The last one was full of tamil soldiers. Behind these ships came ‘*Udaygiri*’ (the mountain of the rising sun) followed by “*Lakshipashā*” (the abode of the harvest goddess). In the latter ship the priest Subhai took up his residence with all the requisites for worshipping *Hara-Gauri*. The next two vessels were “*Udaytara*” (the Morning Star) and “*Gangaprasad*” (the Favour of the Ganges) respectively. The last one of the fourteen ships was the flagship termed “*Madhukara*” (the Bee) which was the best of the lot. In it the merchant Chand, the lord of the fleet, established his quarters with his five advisers. During the voyage the crew sang *sari* songs (a kind of chorus) all the while.”

Another description is given below from Kabikankan, p. 191 :—

“First was recovered from water the ship “*Madhukara*.” Its drawing-room was made of solid gold. Then came the turn of *Durgābar*. It was full of *Gābar* or sailors. Then came to sight the ship “*Guarekhi*.” Its mast (*Malumwood*) might be seen from a distance of six miles. Another ship which rose up was named *Sankhachur*. It was so big that it had a breadth of eighty yards. Another ship named *Chandrapal* was also recovered from water. Its breadth was so great that when sailing its sides almost touched the banks of the river. The

seventh and the last vessel was named *Chhatimati* which had a cargo of rice."

Inspite of the exaggerated descriptions of the poets that we ordinarily come across about big vessels it must not be construed that smaller crafts were lost sight of by them. We find in Bangsidas, p. 320, the following, "The admiral Gopal who sailed first had with him forty-two small boats (*hat nāo*). The construction of the river boats and sea-going ships are now precisely of the same type as we find it in the old literature, and the nomenclature adopted in the past was on the whole the same as we use it now. It seems that the sea-going vessels and the rivercrafts were built on the same principle. Even the other day a coasting vessel named *Aminakhatun* and its sister vessels of considerable tonnage were built by a merchant of Chittagong with the help of local carpenters and mechanics and the method of building they adopted, appears to be the same as it was done in the past. The strong build and the high speed of these sailing ships were perhaps not inferior to those of similar ships used in England in the days of Nelson. The coincidence of keeping a flagship in the mercantile marine as we find to-day in the navy of the civilised nations is curious indeed. The numbers of ships, seven and fourteen, which the merchants of old generally adopted in completing a fleet were perhaps due to the notion that these numbers were auspicious. For a fuller information about the old Bengali vessels reference may be made to the Folk-Literature of Bengal, pp. 65, 75 and 249.

Among the crew the following may be noted :—

(1) Gābar (sailors) who were of two classes.

(a) Mānjhi or Oarsmen. (b) Dāri or Karnadhār (helmsmen).

(2) Sutradhar (carpenter).

- (3) Karmakār (blacksmith).
- (4) Pāik (foot soldiers).
- (5) Dubāri (Diver).
- (6) Mirbahar (admiral).
- (7) Kārikar (craftsman of various description).
- (8) Kārāri (helmsman and captain).

Gābar.—A sailor. The caste from which boatmen were generally recruited is still known in Bengal as *Gābar*. They were exceptionally sturdy as the term "*Gaithyār-gābar*," applied to them, signifies great physical strength. The sailors used to sing a chorus called *sāri* when plying their oars. See History of Bengali Language and Literature, p. 396. See also *Satyanarayana Punthi* edited by Abdul Karim and *Manasa Mangal* poems for *Gābar*. The sailors were mainly East Bengal people. See Kabikankan, pp. 198 and 207-208. For plying vessels the *Gābars* used 'Danda' (helm), *Danda kerwāls* (oars), *Bangsakerwāls* (bamboo-poles) and *Fāns* (chords). See p. 195, Kabikankan. See also Kabikankan, pp. 227, 228, 207, 229, 234, 236, 194 for *Gabar*, *Kerwals*, etc.

Sutradhar (carpenter).—Carpenters were needed for repairs and joining of parts; they supplied the necessary crew corresponding to an Engineering staff maintained on board a modern ship.

Karmakār (Blacksmith).—Blacksmiths were engaged in building a ship and as their services were considered indispensable, they were taken on board the ships.

Pāik (foot-soldiers).—They were taken on board the vessels engaged in mercantile pursuits due perhaps to the insecurity of the age. They were engaged to protect the valuable merchandise against any possible attack of pirates or hostile foreigners. The soldiers engaged belonged to different countries. See Bangsidas, p. 329. Mention is found of the Telegu soldiers employed by

the Bengalis in the Manasā-mangal and the Dharma-mangal poems.

Dubāri, or divers.—They accompanied sea-going merchant vessels to ascertain if there was anything wrong in that part of a vessel which remained under the water. See Bangsidas, p. 329.

Mirbahar (Admiral).—It is an abbreviation of the Arabic term Amir-al-Bahar meaning an admiral of a fleet. The admirals would accompany not only warships but also armed merchantmen as appears from the description of Chand's voyage of trade. In Bangsidās we find the admiral Gopal accompanying the expedition of carpenters in quest of *Manapaban* wood perhaps to protect them from any possible aggression. This precaution was necessary to provide against the insecurity of the age.

Merchandise.—As for merchandise on board the Bengali vessels it may be said that our poets described them as mainly intended for export to *Pātan* and Singhal. A system of barter was generally resorted to and fraud played by the Bengali merchants on foreigners of questionable civilization was a theme of our poets on which all of them wrote in the same strain. We find occasional mention of merchandise, but the prices are sometimes ludicrously exaggerated, as during the time when these Bengali works were written, sea-voyage was reduced to a vague tradition in which facts and fiction were hopelessly blended together. Still we give below two lists which no doubt contain some elements of truth. According to Bangsidas it was the Bengali merchants who introduced cocoanuts and betels in some foreign countries. The stories given seem, however, to be mere legend.

A.

Items of Bengali
merchandise.

Articles of
foreign countries.

in exchange of

- | | |
|---|--|
| (1) Betel leaves | ... Ten emeralds for each leaf. |
| (2) Betel-nut | ... Ten gems. |
| (3) Lime | ... Quick-silver. |
| (4) Catechew | ... Gorachana (a bright yellow pigment). |
| (5) Cardamom | ... Pearl. |
| (6) Satabari Kámeswar
(<i>Asparagus racemosus</i>) | Musk. |
| (7) Fruits | ... Golden bricks, bells, etc. |
| (8) Vegetable roots | ... Diamond. |
| (9) Pulses | ... Corals. |
| (10) Onions and garlies | ... Maces. |
| (11) Camphor | ... "Bakhar." |
| (12) Water weeds | ... Diamond. |
| (13) <i>Dolichos gladiatus</i>
(Makhana) | ... Ruby. |
| (14) Goats and sheep | ... Golden does. |
| (15) Radish | ... Ivory. |
| (16) Dry fish | ... Sandal wood. |
| (17) Sugarcane | ... Royal maces (Nabadanda—sign of royalty). |
| (18) Jute | ... Chowrie (chāmar). |
| (19) Wooden utensils | ... Golden and silver utensils. |
| (20) Wooden furniture | ... Golden furniture. |
| (21) Earthenwares | ... Bell-metal utensils. |
| (22) Oil and clarified butter | Quick-silver. |
| (23) Kunkum | ... Jarful of honey. |
| (24) Puppy | ... String of golden bells. |
| (25) Mosquito curtains, beddings, trousers, etc., all made of gunny cloth | Silken clothes and curtains, etc. |

See Bangsidas, p. 344, for the above list.

B.

Items of Bengali merchandise.		Articles of foreign countries.
	in exchange of	
(1) Deer	...	Horse.
(2) "Biranga "	...	Clove.
(3) Suntha	...	Tanka (a kind of wood apple, <i>Feronia Elephantum</i>).
(4) Ape	...	Elephant.
(5) Pigeon	...	Suā (A bristly Caterpillar).
(6) Fruits	...	"Jayfal."
(7) Bahara	...	Betel-nut.
(8) Jute	...	White chowrie (chāmar).
(9) Glass	...	Emerald.
(10) Sea salt	...	Rock salt.
(11) Dhuti (cloth)	...	Pots.
(12) Oystershell	...	Pearl.
(13) Harital	...	Diamond.
(14) "Joani."	...	"Jira."
(15) "Chua."	...	Sandal-paste.
(16) Sheep	...	Horse.

See Kabikankan Mukundaram's Chandi Kabya, p. 191—Dhanapati's exchange of merchandise in Ceylon—for the above list. The exchange of commodities here seems to be somewhat more reasonable than that to be found in Bangsidas.

The Bengali merchants carried on trade with Ceylon and Patan in Gujrat and visited the following notable ports :—

1. Puri.
2. Kalinga or Calingapatam.
3. Chilkachuli or Chicacole in Madras Presidency.
4. Banpur.
5. Setubandha Rameswar.

6. City of Lanka (in the site of Lanka Singhal or Ceylon).
7. Nilacca or Laccadives.
8. Patan.

One of the chief places outside India visited by the Bengali merchants was the Laccadives. Mention is made also of *Pralamba*, *Nakut*, *Aheelanka Chandrasalya* island and *Abartana* island which we cannot identify but which undoubtedly lay outside our country. Vivid description of the coasting voyage of the Bengali vessels from *Saptagrām* (an inland port of Bengal) to Patan in Gujrat by doubling the Cape of Comorin, is found in the *Manasāmangal* poem of Bangsidas. In *Chandikāvya* by Kabikankan Mukundaram we find accounts of mercantile adventurers of Bengal related in glowing terms. The lists of ports, both Indian and foreign, and the condition of sea-voyage tally in both these works.

In Bangsidās we meet with the following description of the voyage of Chand, the merchant. In spite of fancy and exaggeration a rough idea of the sea-routes and ports may be gleaned from it.

“The merchant started for South Patan. There were great celebrations and festivities at the city of Champaka. All the ships sailed one after another; at the head of the Vanguard was the admiral Gopal with forty-two small vessels. After leaving his own territory Chand passed the following places in succession—*Kāmārhati*, *Madhyānagar*, *Pratupgarh*, *Gopālpur* and *Rāmnagar*. He then reached *Kālidah Sāgar* which he crossed leaving to the right *Gandharvapur* and to the left *Birnagar*. Then the merchant reached the mouths of the Ganges after passing *Kāmeswar*, *Mandarerthana*, *Pichalta* and *Rambishnupuri* one after another. At Gangasagar Chand performed worship and sacrificed goats. After leaving Champaknagar the ships were on the voyage for five months. The

merchant passed through many difficult places after having reached the sea. He passed Utkal and Kalinga on his right. Crabs, lobsters, leeches and crocodiles obstructed his passage through the malice of *Manasā Devi*. At last the merchant reached the golden *Lanka* surrounded by golden walls. Chand here saw the *Rakshasa* king and received his pass-port before proceeding further. Then he left Lanka on his right and passed the Malaya mountain near Cape Comorin. He passed also *Bijoynagar* (Ceylonese?) then ruled by King Ahi. The next important place which the merchant passed was *Parasuramtirtha*. Leaving this place the merchant reached the vast sea known as the "*Nilaccarbunk*" (lit. bend of sea near Nilacca—perhaps Laccadives). Reaching this sea the crew felt giddy at the vast expanse of water and deep sound of the waves, big as mountains. They almost lost their way but through the expert direction of Captain Dulai the vessels were steered rightly. It was by looking to the stars that Dulai could keep the right course. After much trouble the merchant Chand and his companions reached the city of *Pātan* then ruled by King Chandraketu. (See Bangsidas, pp. 318-338.)

On Chand's return from *Pātan* he passed the Laccadives sea, the Vindya ranges, Lanka, Setubandha Rameswar, the gulfs were infested with crocodiles, leeches, etc., and reached Kalidahsagar where he experienced heavy storm. (See Bansidas, pp. 396-399.) "

The above description leads us to think that *Pātan*, once a celebrated city in Gujrat, was much frequented by the Bengali merchants who reached the place by sea crossing the Bay of Bengal, part of Indian ocean and the Arabian Sea. The voyage was probably a coasting one and Ceylon which stood mid-way between Bengal and Gujrat by the sea route, was a favourite place of

commerce for the merchants. Pātan is not an inland city similar to that of Tamralipti or Tamluk which was once one of the greatest seaports of Bengal. *Pātan* though means a city such as *Lalitpātan* yet the frequent mention of this particular Pātan and the way leading to it makes us think that it is no other than the Pātan or Somnāth Pātan of Gujrat and not a fanciful creation of our poets.

As for the foreign countries and ports, it seems our merchants frequented the islands and ports of the Bay of Bengal and the Arabian Sea as have already been seen. We see the following in Bijoy Gupta's *Manasāmangal* :—

“ O, merchant, listen. In the north King Mukteswar reigns. It is very difficult to comprehend the ways of his people. They take the seeds of pepper for rice. The king of the east is known as Bidyā-Sanga. The greater the bulk of a person the more respect is shown to him. The people are all degraded and the social customs are in a most pitiable condition. Marriage laws are not at all strict as brothers often exchange their wives. Even a brother marries his sister in that land. The women there enjoy complete freedom and use coloured cloth specially to cover the breast. Caste system is not observed at all. In the west the people are barbarous. They bore their ears, show laxity of caste distinction and use ornaments on the neck. They do not give the girls in marriage unless they are sixteen and even then they put the married girl for some time in priest's house in lieu of his fee. A married girl even keeps the house of her husband's sister's husband. In case of any issue being born it shares the property on both sides.¹

¹ The peculiar customs regarding inheritance such as inheritance of nephews as found in Bangsidas are still current among the Nairs. Preserving dead bodies mentioned in the same work show the knowledge of Buddhistic conditions. See Type set, p. 234.

Now hear the condition of Patan or the South Patan. Its king is *Bikram Keshari*. The people of this land is very rich. They keep jars full of gems. In their land conch shells, pearls, etc., are abundantly found as sea waves fling them frequently on the shore in particular phases of the moon. Even the poor there owned oysters and pearls."

The above lines though full of grotesque fiction seem to contain some grains of truth in them. By the north the poet perhaps indicates the foreign countries to north-east of Bengal. From Chittagong onwards to China the people are fond of taking excessive quantity of pepper with their meal. By the east the poet perhaps means the Buddhist Burma and the adjoining countries where owing to the influence of Buddhism, caste system is ignored and marriage laws are less rigorous. The Burmese women are very fond of coloured garments. Freedom of women is also to be found in Burma. By the western country the poet possibly means Madras Presidency which lies to the south-west of Bengal. As for Pātan, it may be said that, it was a rich city as otherwise Bengali merchant vessels would not be described as visiting that place for nothing.

See also *Kabikankan*, pages 195-196, for voyages of the Bengalees:—

"After the performance of the proper ceremonies before sailing, the merchant Dhanapati passed the following places,—Bhowsingerghat, Matiarisafar, Chandi-gachha, Bolanpur, Purathan, Nabadwip, Mirzapur, Ambna, Santipur, Guptipara, Ula, Khishma, Mahespur, Fulia and Halisahar—all by the side of the Ganges. Then he reached the very celebrated inland port of Bengal known as *Saptagram* by the side of the Tribeni. Here the poet incidentally praised this port and gave it a superior place among the following ports and places (some

of which are Indian and some foreign) known to the poet. They are the ports of Kalinga, Trailanga, Anga, Banga, Carnut, Mahendra, Magadha, Maharastra, Gujrat, Barendra, Vindhya, Pingal, Utkal, Dravir, Rarh, Bijoynagar, Maitra, Dwaraka, Kasi, Kankhal, Kekaya, Purabak, Anayuk, Godabari, Gaya, Sylhet, Kamrup, Koch, Hangar, Trihatta, Manika, Fatika, *Lanka*, *Pralamba*, *Nakutta*, *Bagar*, *Malay* (Indian), Kurukshetra, Bateswari, *Ahu Lanka*, Sibatatta, Mahanatta and Hastina, etc. According to the poet, the merchants of the above places visit Saptagram but the merchants of Saptagram do never visit those ports and places. (These prove the exaggerated notion of the poet about Saptagram).

At Saptagram the merchant took on board sufficient drinking water for his voyage; then he passed some other places of note by the river banks such as Nimaitirtha, Betarah, Bagan, Kalighat, Omulinga, Chhatrabhoga, Kalipar, Himai, Hetagarh, Sanketamadhaba, Madanmalla, Birkhana, Kalahati, and Dhuligram. On the way he experienced much storm on the river Magra. It took the merchant twenty days to reach the canal of *Angarpur*. Then his vessels entered the sea adjoining the country of the Dravidas. The first place of note was Puri celebrated for its temple of Jagannath. Then the merchant visited Chilkachuli, or Chicacole. Next ports of note were Balighata and Banpur which were left very soon. Then they reached the land of the Firinghees (Portuguese). They passed this place stealthily at night as they were afraid of these people who were very strong for their fleet of warships which were known as Harmada (Portuguese Armada, the Portuguese being very strong in ships in these parts). Dhanapati then passed some seas infested with crabs, snakes and crocodiles, etc., like Chand. After much difficulty he reached *Lanka*. Before reaching *Lanka* Dhanapati's vessels touched

Setubandha-Rameswar and crossed *Kalidaha* or Black Sea."

It is peculiar that *Kalidaha* which Bangsidas mentions to be near Bengal, Kabikankan places near Ceylon. It may be that any expanse of blue sea was taken by them to be *Kalidaha*. As for the mention of the Harmadas it may safely be said that they are matters of history. The Portuguese pirate vessels were for some time the curse of the eastern sea.

In the voyage of Srimanta, son of Dhanapati, we come across two islands namely, Chandrasalya and Abar-tana, both lying on the way to Ceylon. We cannot locate these two islands as we cannot locate Banpur "en route" to Chand's voyage for obvious reasons. Though there is evidently much exaggeration about the size of the ships, it is quite probable that the ships of the Bengali merchants were often of enormous size, for enormity of size was the fashion of the time. The Bengali poets had some traditions of the past, to which they added much that they derived from their imaginations.



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From the records, I have come across in course of my researches in the field of old Bengali literature, it shows that ship-building reached a high degree of perfection both in regard to workmanship and efficiency in ancient Bengal when the sea-going ships were actively engaged in promoting the prosperity of the province by conducting commercial intercourse with various countries both within and outside India.

The wood required for the construction of ships were teak, *gāmbhāri*, *tamāl*, *peal*, jackwood, etc. But it seems, the wood of the fabled tree *Manapaban* was, however, best for the purpose. The name itself is poetic, signifying the utmost speed that a vessel would acquire if built with such wood. It was, however, foreign to Bengal and very difficult to be secured as we learn from an elaborate description in Bangsidas (p. 283).

In building a vessel the first work to be done was a ceremony known as 'Dārābindhā' or thrusting of a gold nail (Sonarjal) to the keel (Dārā) with the help of a silver hammer (hātur). It was done by the owner himself. After this ceremony, the actual work of construction was to begin. First a measurement of the vessel was to be taken. Then the keel (Dārā) was to be carefully

constructed with which strong pieces of timber were joined with the help of iron-nails. Next the 'galui' (prow) was to be built. This finished the hold of a vessel. The deck, the *pātātan* (pieces of timber joined to the keel) and the shed were also made. After these, the construction of helm and rudders, and decoration-work made the building of a ship complete. It may be noted that the prow took the appearance of a peacock or a Cuka bird or some other fancy shape specified in the works on art and the ships were accordingly known as "*Maur-pankhi*," "*Cukapankhi*," etc. Mention of seven types of prows representing the shapes of a lion, a buffalo, a serpent, an elephant, a tiger and a bird, is found in old Sanskrit literature, such as *Juktikalpataru*; see also *Viswakosh*, Vol. X, p. 461.

A vivid description of the construction of a vessel is found in *Bangsidas*, p. 286. An idea of this is given below :—

The Lord of Champaka (the merchant Chānd) constructed some vessels for which purpose he himself performed the ceremony of gold nailing (*Sonār-jal* or *jalai*). The length of the vessel was fixed at a thousand yards (more than half a mile, evidently exaggerated). From the keel to the central deck the height was six cubits and a half (thirteen *tāl*) to stabilize the equilibrium of a ship. The bamboo-poles for plying the vessels were also measured with thread. More serious work, however, commenced with the construction of the hold of a ship. The wood ordinarily chosen for the purpose was known as "*Manapaban*," noted for imparting swiftness of the wind to the ship on slightest wish. Very strong pieces of this timber were joined together with the help of iron-nails. Joints were covered by soldering to avoid saline water corroding the iron-nails. In this way the construction of the hold was completed. When it was

finished the metallic sheets (*pith-pāt*) were fitted and the mat doors (*jhāp*) fixed up. Then '*Māthākāstha*,' or, '*galui*' (prow) was made, decorated with golden and silver flowers. The principal cabin was built, after the deck composed of wooden planks had been fitted up (*pātātan*). This chief cabin (*Raighar*) was beautifully decorated with rows of artificial flower garlands. On the vessel the mast (*Malum wood*) was duly fitted. The helm (*pā'wāl*) and its auxiliary piece of timber (*jhokābāri*) were also not forgotten. When these had been finished, a nicely ornamented shed was built on the ship. It had rows of '*chāmar*' (chowri) and festoons of various types which made the vessel look pretty. Finally, the eyes of the figure on the prow of the ship were bedecked with jewels resembling the moon. This completed the building of the ship.

A similar description of ships as found in *Kabikankan* is given below (pp. 221-222):—

"Seven '*dingās*,' or, vessels were built by Biswakarmā and his son Dārubrahmā with the assistance of Hanumān. The mighty hero Hanumān began to saw the wood of various denominations such as '*Sāl*,' '*tāl*,' '*Kāthāl*,' '*peal*,' '*gāmbhāri*,' and, '*tamāl*.' The architect Dārubrahmā in the meantime made the iron nails. They made beautiful vessels each of which were hundred yards in length and twenty yards in breadth. The prow of each resembled the head of a *Makara* fish. It was made of ivory and the eye-balls were made of precious gems. First, the ship '*Madhukara*' was constructed. In its central part there was the '*raighar*' containing *rājāsan* or, the principal cabin for the merchant. A nook was reserved for the helmsman and the back part as the strong room for keeping treasures. There was also the mast on the vessel. Of the jack and the teakwoods *danda-kerwal* or the oars were made and a

helm was fitted to the prow of each vessel. The seven vessels were named :—

- (i) Madhukarā (the Bee)—the flagship.
- (ii) Guarekhi (its prow resembled the head of a Lion).
- (iii) Ranajayā (the Victory).
- (iv) Ranavima (the Terrible in war).
- (v) Mahakāya (the Titanic).
- (vi) Sarvadhara (the All-container).
- (vii) Nātsālā (the Amusement-hall).

The following were the principal parts of a vessel :—

- (i) Dārā (helm) or *patiwāl*.¹
- (ii) Mālumkāstha (the mast).
- (iii) Talā (hold).
- (iv) Māthākāstha (prow).
- (v) Chhaighar (shed).
- (vi) Pātātan (deck).
- (vii) Dandakerwāl (Oar).
- (viii) Bangsakerwāl or Dhavaji (bamboo-pole).
- (ix) Fāns (chord).
- (x) Nangar (anchor).
- (xi) Pāl (sail).
- (xii) Dārā (Keel).

The above names are still used to convey the meaning they did in ancient Bengal. It would be interesting for the purpose of comparative study to find out if some of these technical words were analogous to those used in other parts of India in the literature of ship-building.

In the description, given above, we find elaborate details of the different parts of a ship built in those days. Exaggerated descriptions are, however, apparent, in the writings of Bijoy Gupta specially, who flourished

¹ Dara in the present dialect of the countryside means an oar, but in our old books it has oftentimes the meaning given above.

in the fifteenth century, when ship-building as an art was practically abandoned in Bengal. But though there is much of legend in the stories, the old traditions were not altogether lost sight of. Ships of considerable tonnage for commercial purposes were surely still being constructed. See Kabikankan, p. 220. "If hundred carpenters work for a whole year, only one vessel is constructed"; see Bangsidas, p. 285, "sixteen hundred carpenters cut the branches of the '*Manpaban*' tree and piled them up in rows"; see also Bangsidas, p. 282, "By the command of the king, the chief engineer Giribar and the admiral Gopal started with sixteen hundred carpenters." The descriptions of voyages often go to show that ships of titanic dimensions used to be constructed in Bengal even if sufficient allowances are made for poetic exaggerations. In Bijoy Gupta we find the following:—

"First was launched the *Madhukara*. On it the millionaire Chand took his residence. It was followed by the ship called '*Biju-siju*.' This ship was so big that it broke the crooked projections of the banks levelling them on its way owing to its very big dimensions. Then sailed the *Guarekhi*. It was so high that the city of Lanka, situated a long way off, was visible from its deck. After it, sailed, "*Bharar-Patua*." All the Tamil people were on board this ship. It was followed by "*Sankha-chur*" (the Shell-crowned). It was so gigantic a ship that its sides seemed to touch two opposite shores of big rivers and its bottom the ground under water. Next started "*Ajayshelpet*" (the Invincible steel-bottomed). There was arrangement for a big fair on it. Then could be seen the ship '*Udaytara*' (the Morning star); its length was so extraordinary that when half the portion suffered from rain, the other half enjoyed sunshine. Then sailed '*Tiathuti*' (the Parrot-beaked). It was full of merchandise, such as jute

and coarse blankets, etc. Then followed *Dhabal* (the white). It was so big that it moved slowly and often stopped owing to its great bulk when it was to be set in motion again by sacrificing a hundred goats to propitiate the sea-god. Then sailed '*Kedar*' (the great God Siva). Before reaching the shore it had to be worshipped with incense and *Panchapradip* as is done in a temple when performing the evening service. Then came "*Pakshiraj*" (the Prince of birds). Many fruit trees of considerable size were there for use of the people on board the ship. Then was launched the ship "*Bhimaksha*" (the fierce-eyed). Upon it was taken conch shells numbering fourteen lacs. It was followed by the vessel *Sankhatali* (the treasure of shells). Its principal parts were made of sandal wood. Behind it sailed the vessel '*Ajlā-kajlā*.' It used to devour a hundred goats at every turn of the river (meaning that its size was so big that at every turn its motion had to be ensured by a sacrifice of hundred goats). Thus one by one the ships sailed with the merchant for *Gangāsāgar*."

The following description taken from Bangsidas (p. 288) may also be noted :—

"The first vessel which Chand launched on water was '*Madhukara*.' Its deck was filled with earth, so that it took the appearance of land upon which a small town with markets were established. The foredeck was reserved for worship. A tank of fresh water was not wanting in it with aquatic plants on its surface to keep it cool and with fishes of various descriptions. A vegetable and a flower garden completed the outfit of this wonderful ship. The merchant Chand ascertained the cost of this ship to be fourteen lacs of rupees as may be gathered from what he said to his treasurer Govinda. He furthermore said that the merchandise on board this vessel was worth the same amount.

See also Bangsidas, p. 319 :—

First started *Sankhachur* followed by "*Chhatighati*" (the ship of wares) which was filled with earthen wares. Then "*Kajal-rekhi*" (Lined with collyrium), "*Durgabar*" (the Boon of Durga), and "*Manikyamerua*" (the Diamond-crowned) sailed one after another. The last was so big that it had to be driven by sixteen hundred oarsmen. Then sailed '*Rajballav*' (the favourite of the king), '*Hansakhal*' (the Royal Duck), and '*Sagarfena*' (the sea-foam) one behind the other. The last one was full of tamil soldiers. Behind these ships came '*Udaygiri*' (the mountain of the rising sun) followed by "*Lakshipashā*" (the abode of the harvest goddess). In the latter ship the priest Subhai took up his residence with all the requisites for worshipping *Hara-Gauri*. The next two vessels were "*Udaytara*" (the Morning Star) and "*Gangaprasad*" (the Favour of the Ganges) respectively. The last one of the fourteen ships was the flagship termed "*Madhukara*" (the Bee) which was the best of the lot. In it the merchant Chand, the lord of the fleet, established his quarters with his five advisers. During the voyage the crew sang *sari* songs (a kind of chorus) all the while."

Another description is given below from Kabikankan, p. 191 :—

"First was recovered from water the ship "*Madhukara*." Its drawing-room was made of solid gold. Then came the turn of *Durgābar*. It was full of *Gābar* or sailors. Then came to sight the ship "*Guarekhi*." Its mast (*Malumwood*) might be seen from a distance of six miles. Another ship which rose up was named *Sankhachur*. It was so big that it had a breadth of eighty yards. Another ship named *Chandrapal* was also recovered from water. Its breadth was so great that when sailing its sides almost touched the banks of the river. The

seventh and the last vessel was named *Chhatimati* which had a cargo of rice."

Inspite of the exaggerated descriptions of the poets that we ordinarily come across about big vessels it must not be construed that smaller crafts were lost sight of by them. We find in Bangsidas, p. 320, the following, "The admiral Gopal who sailed first had with him forty-two small boats (*hat nāo*). The construction of the river boats and sea-going ships are now precisely of the same type as we find it in the old literature, and the nomenclature adopted in the past was on the whole the same as we use it now. It seems that the sea-going vessels and the rivercrafts were built on the same principle. Even the other day a coasting vessel named *Aminakhatun* and its sister vessels of considerable tonnage were built by a merchant of Chittagong with the help of local carpenters and mechanics and the method of building they adopted, appears to be the same as it was done in the past. The strong build and the high speed of these sailing ships were perhaps not inferior to those of similar ships used in England in the days of Nelson. The coincidence of keeping a flagship in the mercantile marine as we find to-day in the navy of the civilised nations is curious indeed. The numbers of ships, seven and fourteen, which the merchants of old generally adopted in completing a fleet were perhaps due to the notion that these numbers were auspicious. For a fuller information about the old Bengali vessels reference may be made to the Folk-Literature of Bengal, pp. 65, 75 and 249.

Among the crew the following may be noted :—

(1) Gābar (sailors) who were of two classes.

(a) Mānjhi or Oarsmen. (b) Dāri or Karnadhār (helmsmen).

(2) Sutradhar (carpenter).

- (3) Karmakār (blacksmith).
- (4) Pāik (foot soldiers).
- (5) Dubāri (Diver).
- (6) Mirbahar (admiral).
- (7) Kārikar (craftsman of various description).
- (8) Kārāri (helmsman and captain).

Gābar.—A sailor. The caste from which boatmen were generally recruited is still known in Bengal as *Gābar*. They were exceptionally sturdy as the term "*Gaithyār-gābar*," applied to them, signifies great physical strength. The sailors used to sing a chorus called *sāri* when plying their oars. See History of Bengali Language and Literature, p. 396. See also *Satyanarayana Punthi* edited by Abdul Karim and *Manasa Mangal* poems for *Gābar*. The sailors were mainly East Bengal people. See Kabikankan, pp. 198 and 207-208. For plying vessels the *Gābars* used 'Danda' (helm), *Danda kerwāls* (oars), *Bangsakerwāls* (bamboo-poles) and *Fāns* (chords). See p. 195, Kabikankan. See also Kabikankan, pp. 227, 228, 207, 229, 234, 236, 194 for *Gabar*, *Kerwals*, etc.

Sutradhar (carpenter).—Carpenters were needed for repairs and joining of parts; they supplied the necessary crew corresponding to an Engineering staff maintained on board a modern ship.

Karmakār (Blacksmith).—Blacksmiths were engaged in building a ship and as their services were considered indispensable, they were taken on board the ships.

Pāik (foot-soldiers).—They were taken on board the vessels engaged in mercantile pursuits due perhaps to the insecurity of the age. They were engaged to protect the valuable merchandise against any possible attack of pirates or hostile foreigners. The soldiers engaged belonged to different countries. See Bangsidas, p. 329. Mention is found of the Telegu soldiers employed by

the Bengalis in the Manasā-mangal and the Dharma-mangal poems.

Dubāri, or divers.—They accompanied sea-going merchant vessels to ascertain if there was anything wrong in that part of a vessel which remained under the water. See Bangsidas, p. 329.

Mirbahar (Admiral).—It is an abbreviation of the Arabic term Amir-al-Bahar meaning an admiral of a fleet. The admirals would accompany not only warships but also armed merchantmen as appears from the description of Chand's voyage of trade. In Bangsidās we find the admiral Gopal accompanying the expedition of carpenters in quest of *Manapaban* wood perhaps to protect them from any possible aggression. This precaution was necessary to provide against the insecurity of the age.

Merchandise.—As for merchandise on board the Bengali vessels it may be said that our poets described them as mainly intended for export to *Pātan* and Singhal. A system of barter was generally resorted to and fraud played by the Bengali merchants on foreigners of questionable civilization was a theme of our poets on which all of them wrote in the same strain. We find occasional mention of merchandise, but the prices are sometimes ludicrously exaggerated, as during the time when these Bengali works were written, sea-voyage was reduced to a vague tradition in which facts and fiction were hopelessly blended together. Still we give below two lists which no doubt contain some elements of truth. According to Bangsidas it was the Bengali merchants who introduced cocoanuts and betels in some foreign countries. The stories given seem, however, to be mere legend.

A.

Items of Bengali
merchandise.

Articles of
foreign countries.

in exchange of

- | | |
|---|--|
| (1) Betel leaves | ... Ten emeralds for each leaf. |
| (2) Betel-nut | ... Ten gems. |
| (3) Lime | ... Quick-silver. |
| (4) Catechew | ... Gorachana (a bright yellow pigment). |
| (5) Cardamom | ... Pearl. |
| (6) Satabari Kámeswar
(<i>Asparagus racemosus</i>) | Musk. |
| (7) Fruits | ... Golden bricks, bells, etc. |
| (8) Vegetable roots | ... Diamond. |
| (9) Pulses | ... Corals. |
| (10) Onions and garlies | ... Maces. |
| (11) Camphor | ... "Bakhar." |
| (12) Water weeds | ... Diamond. |
| (13) <i>Dolichos gladiatus</i>
(Makhana) | ... Ruby. |
| (14) Goats and sheep | ... Golden does. |
| (15) Radish | ... Ivory. |
| (16) Dry fish | ... Sandal wood. |
| (17) Sugarcane | ... Royal maces (Nabadanda—sign of royalty). |
| (18) Jute | ... Chowrie (chāmar). |
| (19) Wooden utensils | ... Golden and silver utensils. |
| (20) Wooden furniture | ... Golden furniture. |
| (21) Earthenwares | ... Bell-metal utensils. |
| (22) Oil and clarified butter | Quick-silver. |
| (23) Kumkum | ... Jarful of honey. |
| (24) Puppy | ... String of golden bells. |
| (25) Mosquito curtains, beddings, trousers, etc., all made of gunny cloth | Silken clothes and curtains, etc. |

See Bangsidas, p. 344, for the above list.

B.

Items of Bengali merchandise.		Articles of foreign countries.
in exchange of		
(1) Deer	...	Horse.
(2) "Biranga"	...	Clove.
(3) Suntha	...	Tanka (a kind of wood apple, <i>Feronia Elephantum</i>).
(4) Ape	...	Elephant.
(5) Pigeon	...	Suā (A bristly Caterpillar).
(6) Fruits	...	"Jayfal."
(7) Bahara	...	Betel-nut.
(8) Jute	...	White chowrie (chāmar).
(9) Glass	...	Emerald.
(10) Sea salt	...	Rock salt.
(11) Dhuti (cloth)	...	Pots.
(12) Oystershell	...	Pearl.
(13) Harital	...	Diamond.
(14) "Joani."	...	"Jira."
(15) "Chua."	...	Sandal-paste.
(16) Sheep	...	Horse.

See Kabikankan Mukundaram's Chandi Kabya, p. 191—Dhanapati's exchange of merchandise in Ceylon—for the above list. The exchange of commodities here seems to be somewhat more reasonable than that to be found in Bangsidas.

The Bengali merchants carried on trade with Ceylon and Patan in Gujrat and visited the following notable ports:—

1. Puri.
2. Kalinga or Calingapatam.
3. Chilkachuli or Chicacole in Madras Presidency.
4. Banpur.
5. Setubandha Rameswar.

6. City of Lanka (in the site of Lanka Singhal or Ceylon).
7. Nilacca or Laccadives.
8. Patan.

One of the chief places outside India visited by the Bengali merchants was the Laccadives. Mention is made also of *Pratamba*, *Nakut*, *Aheelanka Chandrasalya* island and *Abartana* island which we cannot identify but which undoubtedly lay outside our country. Vivid description of the coasting voyage of the Bengali vessels from *Saptagrām* (an inland port of Bengal) to Patan in Gujrat by doubling the Cape of Comorin, is found in the *Manasāmangal* poem of Bangsidas. In *Chandikāvya* by Kabikankan Mukundaram we find accounts of mercantile adventurers of Bengal related in glowing terms. The lists of ports, both Indian and foreign, and the condition of sea-voyage tally in both these works.

In Bangsidās we meet with the following description of the voyage of Chand, the merchant. In spite of fancy and exaggeration a rough idea of the sea-routes and ports may be gleaned from it.

“The merchant started for South Patan. There were great celebrations and festivities at the city of Champaka. All the ships sailed one after another; at the head of the Vanguard was the admiral Gopal with forty-two small vessels. After leaving his own territory Chand passed the following places in succession—*Kāmārhati*, *Madhyanager*, *Pratupgarh*, *Gopālpur* and *Rāmnagar*. He then reached *Kālidah Sāgar* which he crossed leaving to the right *Gandharvapur* and to the left *Birnagar*. Then the merchant reached the mouths of the Ganges after passing *Kāmeswar*, *Mandarerthana*, *Pichalta* and *Rambishnupuri* one after another. At Gangasagar Chand performed worship and sacrificed goats. After leaving Champaknagar the ships were on the voyage for five months. The

merchant passed through many difficult places after having reached the sea. He passed Utkal and Kalinga on his right. Crabs, lobsters, leeches and crocodiles obstructed his passage through the malice of *Manasā Devi*. At last the merchant reached the golden *Lanka* surrounded by golden walls. Chand here saw the *Rakshasa* king and received his pass-port before proceeding further. Then he left Lanka on his right and passed the Malaya mountain near Cape Comorin. He passed also *Bijohnagar* (Ceylonese?) then ruled by King Ahi. The next important place which the merchant passed was *Parasuramtirtha*. Leaving this place the merchant reached the vast sea known as the "*Nilaccarbunk*" (lit. bend of sea near Nilacca—perhaps Laccadives). Reaching this sea the crew felt giddy at the vast expanse of water and deep sound of the waves, big as mountains. They almost lost their way but through the expert direction of Captain Dulai the vessels were steered rightly. It was by looking to the stars that Dulai could keep the right course. After much trouble the merchant Chand and his companions reached the city of *Pātan* then ruled by King Chandraketu. (See Bangsidas, pp. 318-338.)

On Chand's return from *Pātan* he passed the Laccadives sea, the Vindya ranges, Lanka, Setubandha Rameswar, the gulfs were infested with crocodiles, leeches, etc., and reached Kalidahsagar where he experienced heavy storm. (See Bansidas, pp. 396-399.) "

The above description leads us to think that *Pātan*, once a celebrated city in Gujrat, was much frequented by the Bengali merchants who reached the place by sea crossing the Bay of Bengal, part of Indian ocean and the Arabian Sea. The voyage was probably a coasting one and Ceylon which stood mid-way between Bengal and Gujrat by the sea route, was a favourite place of

commerce for the merchants. Pātan is not an inland city similar to that of Tamralipti or Tamluk which was once one of the greatest seaports of Bengal. *Pātan* though means a city such as *Lalitpātan* yet the frequent mention of this particular Pātan and the way leading to it makes us think that it is no other than the Pātan or Somnāth Pātan of Gujrat and not a fanciful creation of our poets.

As for the foreign countries and ports, it seems our merchants frequented the islands and ports of the Bay of Bengal and the Arabian Sea as have already been seen. We see the following in Bijoy Gupta's *Manasāmangal*:—

“O, merchant, listen. In the north King Mukteswar reigns. It is very difficult to comprehend the ways of his people. They take the seeds of pepper for rice. The king of the east is known as Bidyā-Sanga. The greater the bulk of a person the more respect is shown to him. The people are all degraded and the social customs are in a most pitiable condition. Marriage laws are not at all strict as brothers often exchange their wives. Even a brother marries his sister in that land. The women there enjoy complete freedom and use coloured cloth specially to cover the breast. Caste system is not observed at all. In the west the people are barbarous. They bore their ears, show laxity of caste distinction and use ornaments on the neck. They do not give the girls in marriage unless they are sixteen and even then they put the married girl for some time in priest's house in lieu of his fee. A married girl even keeps the house of her husband's sister's husband. In case of any issue being born it shares the property on both sides.¹

¹ The peculiar customs regarding inheritance such as inheritance of nephews as found in *Bangsidas* are still current among the Nairs. Preserving dead bodies mentioned in the same work show the knowledge of Buddhistic conditions. See *Type set*, p. 234.

Now hear the condition of Patan or the South Patan. Its king is *Bikrom Keshari*. The people of this land is very rich. They keep jars full of gems. In their land conch shells, pearls, etc., are abundantly found as sea waves fling them frequently on the shore in particular phases of the moon. Even the poor there owned oysters and pearls."

The above lines though full of grotesque fiction seem to contain some grains of truth in them. By the north the poet perhaps indicates the foreign countries to north-east of Bengal. From Chittagong onwards to China the people are fond of taking excessive quantity of pepper with their meal. By the east the poet perhaps means the Buddhist Burma and the adjoining countries where owing to the influence of Buddhism, caste system is ignored and marriage laws are less rigorous. The Burmese women are very fond of coloured garments. Freedom of women is also to be found in Burma. By the western country the poet possibly means Madras Presidency which lies to the south-west of Bengal. As for Pātan, it may be said that, it was a rich city as otherwise Bengali merchant vessels would not be described as visiting that place for nothing.

See also *Kabikankan*, pages 195-196, for voyages of the Bengalees:—

"After the performance of the proper ceremonies before sailing, the merchant Dhanapati passed the following places,—Bhowsingerghat, Matiarisafar, Chandigachha, Bolanpur, Purathan, Nabadwip, Mirzapur, Ambna, Santipur, Guptipara, Ula, Khishma, Mahespur, Fulia and Halisahar—all by the side of the Ganges. Then he reached the very celebrated inland port of Bengal known as *Saptagram* by the side of the Tribeni. Here the poet incidentally praised this port and gave it a superior place among the following ports and places (some

of which are Indian and some foreign) known to the poet. They are the ports of Kalinga, Trailanga, Anga, Banga, Carnut, Mahendra, Magadha, Maharastra, Gujrat, Barendra, Vindhya, Pingal, Utkal, Dravir, Rarh, Bijohnagar, Maitra, Dwaraka, Kasi, Kankhal, Kekaya, Purabak, Anayuk, Godabari, Gaya, Sylhet, Kamrup, Koch, Hangar, Trihatta, Manika, Fatika, *Lanka*, *Pralamba*, *Nakutta*, Bagar, *Malay* (Indian), Kurukshetra, Bateswari, *Ahu Lanka*, Sibatatta, Mahanatta and Hastina, etc. According to the poet, the merchants of the above places visit Saptagram but the merchants of Saptagram do never visit those ports and places. (These prove the exaggerated notion of the poet about Saptagram).

At Saptagram the merchant took on board sufficient drinking water for his voyage; then he passed some other places of note by the river banks such as Nimaitirtha, Betarah, Bagan, Kalighat, Omulinga, Chhatrabhoga, Kalipar, Himai, Hetagarb, Sanketamadhaba, Madanmalla, Birkhana, Kalahati, and Dhuligram. On the way he experienced much storm on the river Magra. It took the merchant twenty days to reach the canal of *Angarapur*. Then his vessels entered the sea adjoining the country of the Dravidas. The first place of note was Puri celebrated for its temple of Jagannath. Then the merchant visited Chilkachuli, or Chicacole. Next ports of note were Balighata and Banpur which were left very soon. Then they reached the land of the Firinghees (Portuguese). They passed this place stealthily at night as they were afraid of these people who were very strong for their fleet of warships which were known as Harmada (Portuguese Armada, the Portuguese being very strong in ships in these parts). Dhanapati then passed some seas infested with crabs, snakes and crocodiles, etc., like Chand. After much difficulty he reached *Lanka*. Before reaching Lanka Dhanapati's vessels touched

Setubandha-Rameswar and crossed *Kalidaha* or Black Sea."

It is peculiar that *Kalidaha* which Bangsidas mentions to be near Bengal, Kabikankan places near Ceylon. It may be that any expanse of blue sea was taken by them to be *Kalidaha*. As for the mention of the Harmadas it may safely be said that they are matters of history. The Portuguese pirate vessels were for some time the curse of the eastern sea.

In the voyage of Srimanta, son of Dhanapati, we come across two islands namely, Chandrasalya and Abar-tana, both lying on the way to Ceylon. We cannot locate these two islands as we cannot locate Banpur "en route" to Chand's voyage for obvious reasons. Though there is evidently much exaggeration about the size of the ships, it is quite probable that the ships of the Bengali merchants were often of enormous size, for enormity of size was the fashion of the time. The Bengali poets had some traditions of the past, to which they added much that they derived from their imaginations.
